# $\square$ Rob Brunia Cor van Wijgerden 



## Learning chess Manual for chess trainers

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# Learning chess 

## Manual for

chess trainers

Step1

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Information: www.stappenmethode.nl
E-mail: info@stappenmethode.nl

## Contents

Preface ..... 4
The first step ..... 5
Chess development of a child ..... 5
Organisation. ..... 9
Motivation ..... 10
Teaching ..... 11

- Orientation ..... 14
- Prior knowledge ..... 14
- Acquisition ..... 15
- Practice ..... 19
- Testing ..... 26
Certificate ..... 27
Indications for the use of this manual ..... 28
Lesson 1: Board and pieces ..... 29
Lesson 2: How the pieces go ..... 34
Lesson 3: Attack and capture ..... 41
Lesson 4: The pawn ..... 49
Lesson 5: Defending ..... 56
Lesson 6: Check ..... 65
Lesson 7: Mate (1) ..... 71
Lesson 8: Mate (2) ..... 78
Lesson 9: Castling ..... 88
Lesson 10: Profitable exchange ..... 93
Lesson 11: Twofold attack ..... 100
Lesson 12: Draw ..... 106
Lesson 13: Mating with the queen ..... 111
Lesson 14: Capturing en passant ..... 115
Lesson 15: The notation ..... 118
List of concepts ..... 123
Ordering ..... 128


## Preface

The Step by Step learning system is an officially acknowledged method by the Dutch Chess Federation. It has been successfully adopted by the majority of chess clubs and schools in the Netherlands and Belgium.

The whole course consists of six manuals, specifically for chess teachers and trainers (the first step also for parents), and six workbooks that can be used by the students themselves.
The course introduces the game of chess in a no-nonsense, common-sense way to all budding players from ages 6 up. It introduces many psychological aspects of the game and avoids the pitfalls that characterise many less-extensive courses. It would allow anyone of average and above average ability to absorb - at one's own pace - all the rules and skills of chess that are necessary to become a strong club player. It also tries to remove most impediments that often cause players to play below their strength.

In the first step all the rules of the chess game are introduced. Furthermore, much attention is paid to developing of the basic skills, necessary to play chess. Comparing with other books for beginners the step-by-step method introduces an unique sequence of the teaching material. Learning how to mate is postponed as long as possible. This sounds astonishing and even incredible but up till now, practice has shown that this approach works perfectly. Children learn to play chess very well, for sure if they get enough time in between to play and practice.

At this moment not all books of the chess course are translated into English yet. You will find updated information on our website at:
www.stappenmethode.nl
For more information, please contact info@stappenmethode.nl
Enjoy your chess lessons.

Rotterdam, May 2004
Cor van Wijgerden

## The first step

The first step deals with all the rules (laws) of the game of chess. Additionally, a lot of attention is devoted to the basic skills that are necessary to play the game.
The elementary learning material appears to be simple and indeed, some teachers manage to work through the first step in three months. That is not the best approach, however. Essential chess techniques like mating the opponent require a more extended learning period. It is better to plan a period of a year to really master the basic skills (there will always be exceptions). Just let students play. You will easily catch up on 'lost' time at a later stage.

## The chess development of a child

The game of chess has an enormous attraction to children. The shape and movement of the chess pieces fascinate them. Chess is a game in which you can be boss, and where you face the consequences of your own actions. Good or bad luck, as you experience in games like 'Bingo' or 'Monopoly ', does not exist in chess. In short, children think it is a nice - even cool game.

## Capturing

After learning the way the pieces go and how to capture your opponent's pieces playing becomes a proper treat. For children, the first aim of the game then becomes capturing the opponent's pieces. The captured pieces are then neatly arranged in order of battle along the side of the board, preferably on their own side. The loot is regularly counted. Children will even count them if nothing has been captured in the meantime.
Capturing becomes the aim of the game for children. It does not really matter a lot to them whether material is lost. Even if they know the concept of mating and are partially capable of executing mate, they will remain so fascinated by capturing that this is what they are after in the first place. They will select a piece (each child having their own preference) and will start hunting with it. If the piece is killed in action, then it is the turn of the next piece. When one of the players is mated, it is often by accident and it comes as a surprise to both players. They would rather continue! "You are

## Material phase

The period in which children are occupied with the material itself is easily identifiable. We call this period: the material phase. The children explore the pieces and the way they move over the board, and by accident and error they become more skilful. They do not hesitate anymore about the way the pieces go. The children will be helped enormously in their chess development, if they get the chance to work through this material phase at their own pace as completely as may be possible. One of the benefits (among others) in later games will be that they do not continue to give pieces away.

## Spatial phase

Mastering the concept of mate and focusing on finding a mate are only sufficiently effective if a child gets sufficient insight in the spatial division of the board during the material phase. It has to discover that the way the pieces move does not only extend to other pieces but also to squares. Only then can there be some talk of (an attempt to) spatial control. The students reach a new plateau: termed the spatial phase, without completely leaving the previous one. To start with this phase without taking the previous one into account will lead to more and unnecessary mistakes in the games of the children. It will the take the children quite some time to reach the following phase.

## Time phase

We play moves in chess with a certain goal in mind. We need time to reach that goal.
Time is expressed in moves. Chess players call a move a tempo (i.e. 'time' in Italian, with its plural: tempi). The stronger we start playing, the more important tempi become. Even playing as White is then an advantage, because White is the side that starts the game. For this reason, we call the third phase of development the time phase. The fact, that it takes a number of years before a child reaches that level requires a bit of explanation.
Students do not have an inkling of the importance of time in the first step. They sometimes invent wonderful plans that are a few moves deep, e.g. to catch a pawn with their King. The opponent unfortunately can counter the threat in just one move when the intended capture is near. In our eyes, this is a waste of time, but we have to realize that children do not yet experience that they could have utilised those lost moves better. Even children in the second step pursue with their King an opponent's pawn with a good heart
(White: a4 - Black: Kb3: 1. a5 Kb4 2. a6 Lb5 3. a7 Kb6 4. a8Q). We may conclude from the way they react that they not even consider this strange: "That was close!"
This insufficient understanding of the concept of time is in a way remarkable. Children do not like it when they have to pass a turn during 'Monopoly'. They do realize most certainly that they are at a disadvantage as regards the opponents. You never have to pass a single move during chess: you play whenever it is your turn. That you, nevertheless, may have to pass - i.e. lose a tempo - after all because of 'stupid' moves may occur to them, but the expectation that the opponent will overlook a threat tends to overrule that thought.
As a result of the lessons and comments about their games, they will gradually start to understand the real truth during the second step that a chess game is more than just a sequence of separate moves. Through the exercises they learn the importance of looking a few moves ahead; and as a result of the lessons children learn over the opening (gambits) that you may 'exchange' material for space and time. We are at that time, however, already into Step 3. Only then do the concepts of gaining or losing a tempo get more importance. When commenting on their games, we shall then follow up on this point: "You can gain a tempo by playing this. You will lose a tempo in development. That is going to cost you a tempo."

None of the three above phases are clearly defined and visible periods, but they run partially along parallel tracks. Only the initial and final stages of each phase are at a different point in the learning process. Let's clarify this by making the following comparison:
Material phase: from January through June
Spatial phase: from March through September
Time phase: from May through December
Experience reveals that children need all their attention and energy at the start of a certain phase, so that there is no room and energy left over for the next one. As soon as you observe a certain manner of control, you may slowly start with the next phase.

## Relevance for the chess lesson

A chess trainer will do well if he takes the three stages described above into account during his lessons. He will help his children by allowing them to play a sufficient number of games and by letting them make the exercises during the material phase. The right concepts and skills will thus be acquired and exercised at the right moment. It is a waste of time if students
are learning a spatial aspect like mate, and if they have to think about the way a certain piece moves at the same time.
The duration of each phase tends to depend on the individual. This is the reason that our aim should be to adapt chess teaching as much as possible to suit the individual child. In practice, this will of course conflict with a lack of manpower, but we get quite far in the right direction by means of the exercise sheets, and especially by playing enough games.

## Consequences for practice

The above-mentioned phases also have importance for the practical game. It does not make sense to point out all kinds of aspects regarding the spatial division of the board during the material phase, nor about giving mate in a certain position. Nor does it not matter to force children to think a long time about their moves. The point is that the problematic nature of the game is represented for children by the material itself that is on the board, and not by any other factors. In practice, we have noticed many wellmeaning people who think that they are promoting a positive development by forcing children to think a long time about their moves. Unfortunately, the opposite is true. The child gets bored until the moment that it is allowed to make his move and will lose interest in the game.
It is evident that playing with a clock at this stage is not appropriate and only causes the child to lose concentration.
Assistance by the trainer during a friendly game like: "Just have a good look, you can capture a piece" is in a different category altogether and is the right thing to do. We always need to remain aware during teaching and when commenting on the children's games in which phase the children are. That way we may be able to correct the child's errors more effectively.


## Organisation

## Conditions for the chess lessons

The conditions for chess lessons are, at least on paper, simple:

- a room with furniture

There is always a space available in schools for teaching and playing. The situation in chess clubs is often less suitable. In the worst case, youth clubs have just one room available where all activities for all the steps have to take place. To make matters even worse, after the 'hour of chess', the club night for adults will have to be held in the same room. The ideal situation is that each group has its own room for their own lesson. Playing games, however, can be staged with other groups in a larger room.

- chess boards and pieces

The pieces used by the children should preferably be large, rather larger than normal size. The idea that children's chess pieces should be comparatively smaller is based on a wrong assumption. Larger pieces promote the ability to recognize and to handle them: the younger the children are, the more important the size of the chess pieces. The board should be of a size comparable to the pieces and should have numbers and small letters on the edge. Children should have their own board during the entire lesson.

- a demonstration board with pieces

When teaching groups of more than 4 children, a demonstration board should be used, preferably a large board (of about $110 \times 100 \mathrm{~cm}$.) that could be placed or hung somewhere. The most suitable would be a magnetic board, although a wooden board with edges on which pieces can also be used.

- a school board or a flip-over to write upon

This comes in handy if the teacher wishes to write down the main points of a lesson as a visual support.

- accessories for the demonstration board and normal boards to mark the squares
Indispensable are accessories to mark squares and actions taking place on the board. Coloured magnets or a marking pen (in case of a board that can be wiped) are ideal. Coloured counters are handy for the boards of the children, and coloured pencils for the exercise books.


## The place of the children

A pleasant seating arrangement for small groups is a half circle or a horseshoe shape around the demonstration board. All children will be able to see the demonstration board well in that seating arrangement, while the teacher can oversee all boards of the students quickly. He can walk at any time to any board to check or to assist.
Preferable all children should have their own board during the lesson. If this arrangement cannot be realized and two children have to work with one board, it is important that the children can turn their chair towards the demonstration board during the lesson. If they have to look sideways towards the demonstration board, then their orientation becomes more difficult.
Children require separate skills when working together on one board: the ability to cooperate and to wait for each other. To sit opposite each other like during a game has the disadvantage that the perspective towards the board is different for each of them. It is therefore better to let young children sit next to each other behind the chess board during the explanation.

## Fixed time

Structure is important for chess lessons. A fixed time to start and a fixed duration for the lesson are experienced as pleasant by children. That applies both to chess at a chess club and in school, even if it is an extracurricular activity.

## Structure of the chess hour

Children like to play games. We use this knowledge by dividing the lesson into an instruction part and a game part. More time is allocated for playing chess. If there is a fixed time for the duration of the lesson, and therefore a fixed time to play, the enthusiasm of the children will remain constant, even if more difficult subjects are covered.

## Motivation

Children want to learn chess for various reasons, whether it was seeing Searching for Bobby Fischer or the beguiling movement of those wooden dolls over the board. Their environment may play a large role too: their school teacher wants them to learn chess or their grandpa urges them.
To learn chess is a challenge, it is something new that you may learn to
manage at your own level. This starting motivation, curiosity, unfortunately only lasts a short time. We therefore have to remain alert once the initial attraction faded:

- offer something new
- raise the skill of the child

Because the child will start to play better chess, it enjoys learning and using this new ability. Then the child will remain interested. His motivation will transfer at a later stage to the playing of games. The challenge then is to measure his skills with others. His real love for the game of chess will develop at a later stage. When we start with the chess lessons, we shall therefore have to focus first of all on supporting and raising the motivation of the children. A few points of attention in order to maintain their motivation are:

- make sure there is a good atmosphere
- be well-motivated yourself (good preparation)
- show interest in the students and approach them positively
- adapt to the games and the level of the students
- teach well

We shall give ample attention to this latter point in this manual.

## Teaching

Teaching is not simple, certainly not for an inexperienced teacher. He has to deal with the teaching material and the children, and he has to use his wits in managing the teaching process correctly. Just following the ready-to-use lessons in this manual is not sufficient for that purpose. It is really necessary to know what you are doing.

## Sequence of the teaching material

In which sequence should the teaching material be introduced? Many teaching manuals choose the 'logical' approach and teach mating as quickly as possible because that is the aim of the game. In this method, mate is only introduced in lesson 7. Why? Mate is a concept for which the student (among others) needs to have knowledge of the way the pieces move over the board, of attack and of defence. To master the concept of defence adequately is already quite a job.
The structure of the teaching material in chess therefore requires a dependent structure. Students have to fully master specific learning subjects
before they can successfully tackle the next subject. To start with mating before the students have mastered all concepts from the previous lessons sufficiently, lowers the chance that they will master mating as well as the following subjects.

## Sequence of the lessons in the first step

The sequence of the lessons depends on various factors:

1. logical need

When covering mate, all partial concepts should be known (how the pieces go, attack, capture, ways to defend, check and how to get out of check)
2. importance, utility

Mate is the aim of the game and it therefore needs to be covered as soon as possible. The children want to play games. A rule like 'castling' will therefore have to wait.
3. variation, change of subject

Lessons with the same kind of content should not be given in sequence.
How the pawn moves, should therefore not be discussed immediately after the lesson 'How the pieces go.'
4. Age and level

The twofold attack (one and a half move) can easily wait until a later time for young children as well as for weaker groups.

## Sequence in the course of lessons

It is useful to keep the following principles in mind:

1. from concrete to abstract

We shall explain this rule by means of examples.
2. from easy to difficult

The way the rook moves is much easier for a child than the way the knight moves. For this reason we deal with the rook first. The pawn appears to be simple but it is better to postpone discussion about it a bit because of the many extra rules (the double step, moving straight but capturing diagonally, not moving backwards, and pawn promotion).
3. from important to less important

The 'en passant' rule is less important for games of the children and is therefore discussed only at the end of the step (and then only because it is a rule of the game). When protecting pieces, the direct ways are dealt with first. The indirect ways are omitted altogether.
4. from simple to complex

We first deliver mate on the edge of the board with a piece that is
protected. Only then do we introduce mating positions with more than two pieces and in the middle of the board.
5. from general rule to specific rule

We first learn to defend and only then to get out of check (the latter is easier!)
6. from simple concept to multiple

We first discuss protecting a piece and only then interposing a piece that should itself be protected.

## Structure of a lesson

The results of learning are determined by many factors. A personal characteristic like intelligence can't be decisively influenced, we do however have a direct influence in the way the lessons are structured and presented, the help, which the students receive, and the feedback during the learning process (see schedule of the teaching model later on).
The subject-matter in this manual is structured in such a way that there is a logical sequence of the entire process, both in the structure of an individual lesson and through the entire cycle of lessons of the first step.
We will be able to accompany the learning process of the children better by using a lesson structure.
We differentiate between:

- orientation
- prior knowledge
- acquisition (instruction)
- practice
- testing

feedback

Prior to every lesson that he is teaching the teacher must ask himself what he wants to accomplish, what goal he has in mind and what material he wants to convey. The students also must have a goal in mind.
The second step is to recall the prior knowledge; the children are asked to recall those points of their knowledge that relate to the subject to be discussed. The children need that knowledge in order to acquire the new skills. The students exercise what they have learned after the explanation phase, e.g. by making a number of exercises. This way, the teacher can check how much of the subject has become clear to each child.
In addition, it is important that the teacher checks whether the students apply what they have learned to their games. It is further advisable to test the children after a while to see whether the discussed material is still there and ready to be used.

In any moment in the lesson feedback will have to be given to the students. Stress what is correct and what isn't and especially why not. We shall now discuss each part of the pattern of lessons a bit more extensively.

## Orientation

The orientation is indicated with: goal of the lesson. It is important for the instructor to find his bearings in what the main point of the lesson is and why the students have to learn it at this particular stage in the step. If he does not realize this point, chances are that these points are not emphasized sufficiently. The summary at the end of each lesson and the reminder - if given - do assist in this.
The students need to grasp the purpose of the lesson. They have to be stimulated to take an active part in the lesson. A good start by drawing their attention is a good beginning. That can be done by going into their world of experience, using a suitable little story. It must relate to the material that is to be discussed (exchanging a big marble for 4 ordinary ones is a profitable exchange). In case this is not possible, putting a position on the demonstration board is a good alternative. We put a position on the board at the beginning of a lesson about capturing, in which a piece is looking at a piece of the other colour. We then ask a simple question "What is the matter here?" One of the games played by the children could provide common ground later in the lessons.

## PRIOR KNOWLEDGE

Recalling prior knowledge is much more important than many teachers think (this is often left out for the sake of convenience). The lesson that deals with mate is much more difficult to follow for the student who does not know all the different ways to get out of check than for the student who has this kind of knowledge ready at hand. The specific prior knowledge: what does the student already know of the subject he needs to know, can be found in the manual. We can sometimes appeal to more general prior knowledge: e.g. what may students apply in this lesson that they have learned elsewhere (e.g. checkers or other games).
Having sufficient knowledge at one's disposal means that new information can be quicker and more easily acquired and absorbed. What is learned
becomes attached to and part of what was learned earlier.
We must not only recall and test the necessary present knowledge of the students but also reinforce it. Reinforcing the structure of the subject-matter with the students makes it is easier for them to acquire new information and to retain it. The chance for practical application is not yet assured as a result of this but it certainly increases.

## ACQUISITION

## Concepts

The (possibly) unknown (chess) concepts that will be discussed in the respective lesson are given under this captioned heading. We cannot simply assume that students already have mastered concepts that may also occur in daily life. Some concepts in chess have more than one meaning. Exchange means e.g. capturing a piece from your opponent by giving a similar piece of your own. However, winning (or losing) the 'exchange' means (your opponent) capturing a rook while giving a bishop or knight.
Another nice illustration of such a misunderstanding is also the following occurrence in a game between a trainer and a (young) student where the different meanings of 'moving back' lead to a misunderstanding. The trainer played Bfl-b5+. The reply came immediately without thinking: h7-h5. Trainer: "You are in check. Just move the pawn back."
Child: "Pawns are not allowed to move back."

## Instruction

Conveying a new subject can be done in different ways: tell a story, explain it, show it. The demonstration board is a very useful tool in this respect. Anything verbally communicated should always be supported by an example. The positions for the demonstration board are given in this manual for each and every lesson. The safest way is to copy these positions exactly. The teacher must get into the habit of stepping back after making a move on the demonstration board. He then does not stand in the way of the students and he has a good overview himself of the position on the demonstration board.

The teacher should, however, refrain from almost literally quoting the text of this manual. The vocabulary used and the speed at which he speaks should of course be adapted to the level at which the group is able to understand the subject-matter.

The explanation should never result in a prepared monologue. Children do not want to be a passive audience. They want to participate actively. Even if students may appear to be attentive, they could very well be completely elsewhere with their thoughts. Everyone has to be drawn into the lesson. Examples could be set up on their own board and solved, or a child could come to the demonstration board to show the solution. Interaction must be our device.
The preparation should be adapted to the way the children react from the very first moment on. They understand what you tell them or they do not; a new explanation may then be necessary. A short summary may also be helpful. The nature of the questions is a further indication whether the explanation of the subject-matter has to be repeated or has to be put across in a different way.
If possible, the main points of the lesson have to be written down during the lesson on a blackboard or on a flip-over. The quantity of verbally presented information otherwise becomes too much. It is important that the students learn as little as possible by heart during the instruction. The students may use the summary on the board later on when absorbing it. Important to remember is the fact that part of the children prefer to absorb the subject-matter through reading.
Many subjects lend themselves for a schematic representation:
$\square$ protecting
defending $\square$ moving away

- capturing
$\square$ interposing
The awareness that learning is not a passive process but that it requires mental activities of the students is important. Children have to relate the new knowledge you give them to the knowledge they already have. To help children to relate this new knowledge independently can be accomplished in various ways. This issue will now be considered in more detail in the sections 'Asking questions' and 'Forms of assignments'.


## Asking questions

Asking questions is an important skill when giving an explanation. The teacher will have to use this skill frequently. The art of asking the right question presupposes the ability to listen.
We ask questions with various aims in mind. First of all to find out whether a certain kind of knowledge or ability has been acquired (e.g. when recalling the prior knowledge) to raise the interest of the students, and, finally to draw their attention or to 'bring their attention back' to the lesson. An
important aim of asking questions is to let the students absorb the subject through thinking. The subject-matter will then be better retained, and available when necessary.
Points of attention when asking questions:

- Ask questions in such a way that everyone has enough time to think about it.
Ask a question, pause for a moment and only then address someone. While pausing, reflect on who will have to answer and anticipate the answers.
- The reflection time should not be interrupted.

In each group, someone will raise his finger at once after the question. The inclination to allow the answer to come quickly from the group is fairly tempting, 'the raised finger' otherwise disturbs the order. By allowing everyone to think about the question, the students could write the answer down (in chess, the answer is short, usually a move), or tell the answer to their neighbour. Everyone is then actively taking part.

- Formulate the question as clearly as possible.

Ask single questions. Do not ask "How can you save the bishop and what does White threaten then?" but ask the questions in sequence.

- The teacher should not cut off the answer without reason.

Student: "I think that I shall play the bishop." Teacher: "Very good because it will be safe on g 5 and then delivers check." It is better to continue with a question.

- The answer should be evaluated.

The right feedback is essential. The way you react determines strongly whether the desired learning effect will take place. "You are giving a knight away" is a different approach than if you say: "You have protected your rook, but do you see what is happening with your knight?" Lift out the good elements from the given answer.

- Do not work with the same children all the time.

Also choose passive children; don't let only the best student answer, but also ask children who do not raise their finger. And make sure that, from time to time, you give someone a turn twice in a row!

- The sequence of the questions has to be didactically well-founded.

A principal is that the build up of questions should be from easy to difficult, from simple to complicated.

For the correct application of this last point, there is some insight required into which aspects of chess are difficult for children. An outline:

- A move forwards is often easier than a move backwards.
- A move over a longer distance, irrespective of the nature of the move (capture, play, protect) is often harder to see than over a short distance.
- The quantity of pieces on the board is also a determining factor; the more pieces there are on the board, the more complicated it becomes.
- A position with more than one theme is more difficult (e.g. attack, capture and protect play a role in the twofold attack).

The technique of 'passing on questions' fits well in these chess lessons, particularly when enumerating. "In which ways can you get out of check?" Three children can answer to that. All students are forced to stay alert. 'To keep on asking questions' is useful. When a student does not know the answer, or when a wrong answer is given, the questions can become more specific in order to get the right answer.

## Forms of assignment

The students can be put to work in various ways during the instruction.

## Solve a position

The position on the demonstration board is set up on the children's own board. Each student will then be able to solve the assignment at his own level. The answer can be checked easily. This form is particularly satisfying when there is more than one solution. "Put the knight in the middle and place pawns on whatever squares the knight may jump to in one move" is a simple example. Any other position in which a piece has to be placed in on the board is suitable too.

## Invent a position yourself

This form can be used in almost every lesson. "Invent a position in which White can deliver mate in one." Nice and instructive. Two students in turn may invent a position with the given theme and then solve it.

## Playing format

The students play along on their own board and they play a move in turn, e.g. a rook move when explaining how a rook moves. It could also turn into a 'game'. The knights are in two corners (al and h8). Who will get his knight into the corner of the opponent first? This game will have a surprising result when played correctly, (which we will not give away!)

## Cooperation

Learning together can be instructive. As a group, students sometimes know
better where the difficulty lies in understanding the material or in solving a problem. They are closer to each other in their development. This form of cooperation can be useful, particularly if the teacher is a strong chess player.

## Summary

The most important points from the lesson are summarised under this heading. At the end of the instruction, it is useful to enumerate all what has just been learned with the students.

## Practice

## Reminder

The verbal instruction given by the trainer is briefly summarised for the students by means of reminders. These are included in the exercise book. Even the best teacher cannot prevent that part of the instruction does not get across. The children will subconsciously make a selection of that part of the lesson that they grasp. As a result a few things will be remembered, and this is unfortunately not always the most essential part of the lesson. The reminder, however, will convey all essential information.
Further, it is important that the student is able to read through the subjectmatter besides the verbal explanation. At home, when the chance to ask questions has gone, the reminder can refresh the knowledge that has sunk away. An added advantage is that the parents see what their child is learning at the chess club and can if necessary brush up on their own knowledge.

## Workbook

The purpose of the exercise sheets is that the children practise the material that has been covered. Each child needs a work book, so that everyone can work and put into practise what was learned at one's own level and at one's own pace.
The number of problems that a student makes per lesson will depend on the time allowed, the degree of difficulty and the level and interest of the student. It is definitely not necessary to always complete an entire page. The purpose of the assignments is not to keep the children quiet and occupies. White is at move in all positions, except in positions where a black dot ( $\bullet$ ) is shown at the right upper corner; this means Black is to move.
The purpose and topic of each exercise sheet can be found under the heading 'Explanation'. In certain cases, an indication is also given as to
what problems one can expect.

## Board and pieces

A board and pieces for each child is desirable, so that all assignments can be set up on a real board if necessary. The position of the diagram will gradually be solved by more children. More and more by heart, although fingers and pencil dots will still often be an aid. The possibility to set up the position on a board should always be available for the more difficult assignments. Solving a position is in that case easier because the child then can fall back on making a move on the board. The children's use of the board is an important indication for the teacher as to how far the child is in his development.

## Content of exercise sheets

Assignments with a particular theme are found on most exercise sheets. By means of a well-thought out instruction we teach the children plan not to make these exercises at random. We teach them what they have to look for, and we indicate a search strategy for them. It should become clear to the children how problems of a certain type can be dealt with in general. This is particularly useful for the practical game where every position is different.
The exercise sheets are not all the same. Variation keeps up the motivation and diversion in the way of solving problems raises the process of generalisation and helps children to adapt it to their own games.
Exercise sheets require various actions:

- indicate squares (mark with a plus sign)
- which moves are possible (mark squares)
- play the best move (an arrow for the move made)
- insert a piece (write down initial of the piece)
- indicate all good moves
- multiple choice


## Note down or make arrows?

A pleasant facet of working with diagrams is that writing down the answers in the standard method of notation can be postponed until the moment that the child is ready for it. Especially if writing down the right notation is more difficult for a child and takes him longer than finding the solution to a chess problem.
Learning notation is postponed until lesson 15 . The lesson can be inserted a bit earlier for older children, if necessary; a bit later for younger children
when you cannot get around it.
The notation lesson can also be cut into sections, so that this notation skill slowly improves. It is, of course, extremely handy during instruction when the students are able to call moves aloud.
Hardly any single assignments in the beginning phase are more than half a move deep. The right move can therefore very easily be 'notated' by drawing an arrow in the diagram. Arrows are also possible in assignments with more than one move, e.g. the twofold attack. They can then be numbered.

## Helping (general)

Directly after the instruction it is useful to walk amongst the working students, not to give aid, but to check whether everyone has understood the assignment and has gone to work.
After that there shouldn't be any support for some time! Students have the tendency to ask anything that they momentarily don't understand.
When the students are working on the assignment and the material is being absorbed, the instructor should remain busy by walking around, assisting and checking. Direct feedback provides the highest learning effect. Through the number of mistakes made during and after the exercises, the trainer will see what a child has seen and what not, so that he can go further into the matter.
A general guideline has to be that the children will have to answer at least 70 to $80 \%$ of the assignments correctly. If this percentage is lower, then chances are that the child has not grasped the subject-matter, and will continue to make many mistakes. The result is that his motivation will gradually decrease. To let the students muddle on is senseless.
It is advisable in such cases to repeat a lesson or to go further into the positions that the child does not understand. When doing so, it is important to analyze the nature of the mistakes. If, during the exercises of the sheet Capture an unprotected piece the child alternatively captures an unprotected and a protected piece, then it is clear that the subject 'defence through protection' has to be explained once more.
Another approach is to take an exercise that was made correctly as a starting point. Letting them explain why this assignment 'went well', will help them to understand their other mistakes better. The student will discover the rules to be applied together with the teacher. By using this approach, the student becomes less sensitive to constantly changing situations and fewer mistakes will appear when something changes. To use what has been learned in a flexible manner, and to adapt it to continuously changing situations during the training sessions and also in the real game, the child
must develop a conscious and active insight into the way he makes his decisions. Specific assistance is further given for every exercise sheet under the headings 'Wrong' and 'Help'.

## Helping (in practice)

The children will make mistakes when making the exercises. These mistakes indicate where the limits of the child lie as regards insight and skill. Dedicated help is necessary to let the children make progress. A number of factors are of importance:

- Cause of the mistake:
- the subject was not understood
- one of the previous lessons was not understood
- sloppiness (e.g. because of working too quickly)
- attention diverted because of other factors on the board
- Methods for assistance:
- asking questions (do not give the answer yourself)
- cooperate (stay with the child)
- when one way of support does not help, try another

The child should always experience the help positively so that it will continue to ask for help in the future.


The diagram is an assignment from the exercise sheet Defending/Protecting: $A$. Suppose that a child has inserted as answer 1. Nc3-b5. This move is not correct. Other mistakes are also possible. It is important to realize that there are gradual differences in mistakes. A move like 1. Nc3-e2 is more serious (although a better move!) because there is no relation with the assignment at hand.

Assistance can be given in the following way:

- We first set up the position on a real board.
- We allow the child to make the incorrect move.
- We ask if the child can discover what is wrong about this move.
- We allow the child to look at the move from Black's perspective (turn the board around if the child thinks that this is easier).
Most children will then discover the mistake and can start looking for the
correct answer. The concepts of the lessons have been grasped with 1 . Nc3-b5. However in that case, the child has overlooked that the knight is lost. That can be found by 'discovery'.


## The right way to help

Trainer:

- discovers the mistake (1. Nc3-b5)
- formulates the cause (child misses the answer $1 \ldots$... a6xb5)
- concludes that the answer in principle is correct ( Nb 5 protects pawn c 7 ).

Trainer and child:

- the position is set up
- the wrong move is executed
- the trainer asks questions
- help
- turn the board
- remove unnecessary pieces so that only the essential ones remain
- set up another position with the same problem


## Child:

- discovers the mistake
- looks for the right answer


## Record results

In order to get a general impression of a specific student, it is useful to register the results of the children.
The motivation of the children is in direct relation to the obtained result. If everything is correctly and quickly finished, the attention stimulus will diminish because of boredom (the work becomes sloppy and mistakes are made). Slow work with few correct answers, on the other hand, will lead to a loss of self-confidence, so that new assignments will be avoided. When registering results, these tendencies can be dis-

| $\begin{aligned} & 0 \\ & 0 \\ & 00 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | $\begin{aligned} & \text { Q } \\ & \text { R } \end{aligned}$ | - | $\begin{aligned} & \text { Z } \\ & \text { 品 } \\ & \end{aligned}$ | $\begin{aligned} & \text { 훌 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | + 12 | +10 | +12 | + 4 | +10 |
| 4 | + 12 | +11 | $+10$ | - | +11 |
| 6 | + 12 | +12 | +11 | + 7 | +12 |
| 8 | + 12 | +9 | $+10$ | + 6 | - | covered. That can be done quite simply, as in the table. The minus sign means not-yet-made; as soon as the page is finished, the minus sign is changed into a plus sign. Nigel is the problem child here.

It is tempting to keep a much more extensive registration (a student
following system) with error analysis and so on. That means a lot of work, and in practice it means that often no tracking at all is done after a few months' time.

## Differentiation

In each group, there will always be one student who is much faster and more skilful in solving problems. We have made a provision in form of the special assignment sheets for these students. The exercise sheets from the workbook are found in the manual under the heading 'workbook'. The degree of difficulty is indicated with the name.
The idea is that the sheets with an $\delta$ can be made by everyone after the instruction has been given. The sheets with $\delta\}$ are more difficult and will only be directly needed by one or more individuals. However, they are much recommended for everyone, only at a later stage of the course. Most children will never get to the sheets with $\delta \xi\}$. These sheets are the ideal test exercises, but only at the end of the step, or even during a following step.
Children who are quicker than average should be presented with more difficult problems. This should not be seen as a smart way to keep them quiet. There comes a moment when a distinction needs to be made in the lesson, so that both the slower and the quicker students can get into their own stride. Therefore, the best solution is to offer the quicker children the option to maintain their own tempo. Testing will be of great importance for this latter group. It should indicate whether they have really mastered the material and are able to apply it, or that they have only rushed through it.

## Playing format

The digestion of exercises need not only take place in writing. Playing out positions on the board is of vital importance.
Children want to play anyway. "When are we finally going to play a game?" is a frequently asked question. It is a pity that the complexity of chess is such that the students cannot start playing a real game after the first lesson. We are lucky that the need to play in the first phase can be met through all kinds of games. A further advantage is that many skills are learned additionally, and in a playful manner. The way the pieces move is learned automatically as a first skill. That is especially necessary as far as the knight is concerned.
The game positions always involve a small number of pieces, which contribute to the overall clarity. In a real game, each child will play their own game without taking much notice of the opponent. They will learn quite
rapidly during the games that you have to watch the play of the opponent. The students will also learn subconsciously to strategies that are quite important during a real game. These strategies include: the use of the centre, covering as many squares as possible and the battle for a tempo.

## Student versus student

The games can be played between the students themselves. The disadvantage of playing each other is that in some games (e.g. 'Queen traps knight') the defender plays so badly that the better player does not have to strain himself to win. Other games, on the other hand, (e.g. 'Starting position') lend themselves very well for playing each other. A point to remember is that there may be insufficient control in the first stages of the game to apply the correct rules.

## Simultaneous display

An excellent alternative for playing each other is playing against the teacher (either an ex-student or one who is on higher step). A position can be played simultaneously against a maximum of 12 children. More than 12 is not advisable. The students would then have to wait too long for their turn, and with this number there is not much time to explain something on an individual basis.
In this form of exercise, the teacher can observe from close by what points the students have understood well, which subjects give them problems, and which are too difficult. In a question and answer monologue, the teacher tells them aloud the right way to analyze the position. By telling them what move he intends to play, he is able to convey the right manner of thinking. This role-modelling has proven its usefulness at every level. "My queen is attacked. What moves can I play now? I cannot go to a4. In what ways can I defend myself?"
The simultaneous player may on purpose reintroduce in the games the subjects discussed in the lesson. He could leave pieces unprotected, allow himself to be mated, make an unprofitable exchange. He does not really have to allow himself to be mated. "What will you play if I do this?" is a question that makes sense and leaves the door open.

Useful subjects for the simultaneous format are in particular positions in which one side dominates. Playing the weaker opponent (who will always lose with good play) is not very motivating for students. Especially when the position requires mating with the queen, the other player simply cannot do much more than move his king sideways one step at a time. We can
make it a bit more exciting in that case by counting the moves. Then there is something in it for both sides. The trick for the defender is to keep going as long as possible and for the attacker to do the job as quickly as possible. The computer can also be of help in games with a legal position.
Give the side with the queen to the child and the computer will allow itself to be mated willingly time and again. An ideal exercise situation.
All chess programs have been programmed according to the rules of the real chess games. Positions without a king are seldom allowed by any computer program.

## Finish a game(-position)

The main purpose of the chess lessons is to teach the children how to play (better) chess. The main portion of the chess hour after the lesson about mate must therefore consists of playing games.

## Testing

Each teacher has to keep track of whether the students do or do not apply the acquired knowledge in their games. That is harder in the beginning, when games are not yet written down, but you can get a reasonable impression of the children's play if you walk around during their games. It is important not to let the level of knowledge and their level of skills differ too much. In case this happens, it is advisable not to introduce any new knowledge.
It is also of importance to keep an eye on their knowledge level. It is sensible to ask questions about the subjects that have been covered after five lessons or so. The simplest method is to make a summary of the exercise material that was done. This can be found in the sheets marked with Repetition. The familiarity with the material coincides with the familiarity of the positions. What is already known predominates and a good result is probable.
A bit more difficult is solving the problems when the same subjects are tested in new positions. The testing sheets marked with Mix are suitable for the following reasons:

- to record progress
- to introduce tests in a child-friendly manner (first literally mixed repetitions, then mixed repetitions that cover the same theme)
- the mixed exercises resemble real games as closely as possible

The results of the mixed sheets are a good indication to determine whether the your teaching speed is too high or adequate.

## Certificate

The children may take an examination after the lessons of 'step one.' They will get a certificate (see picture - the original one is in full colour) when they pass. The certificate is not a goal in itself. We give chess lessons in the first place to build and to raise their skills ('how to learn and play better chess'), not to get certificates. But these can be a good stimulus to continue with the course material to the end.

We also have to realize that to give children the prospect of the certificate in the beginning of the year will not be a stimulus for very long. The point in which they will receive the real certificate lies too far in the future. Goals that are closer by have to serve as a real stimulus.

When preparing for the examination it is sensible to let the children make a test examination first, and if necessary a second time. However, try to prevent that them doing test examinations too many times. It will put a severe strain on their enthusiasm, and it put too much emphasizes on the examination and the certificate.


## Indications for the use of this manual

The manual contains a great number of split diagrams. These have to be read and set up on the board as separate diagrams. The left side of this diagram has to be set op on an empty demonstration board (thus without the position on the right). When discussing the right part, the position on the left has to be removed. Leaving the position is not recommended, because this often leads to unnecessary misunder-
 standings. If the rook remains on d5, then 1. Rd5xe5 would be best, but it would not be the solution that we had in mind.

The following symbols, which refer to diagrams, are of crucial importance: $\uparrow$ refers to the diagram on the top of the page.
$\Rightarrow$ refers to the diagram in the middle of the page. $\checkmark$ refers to the diagram at the bottom of the page.

The moves in the answers are sometimes accompanied by an exclamation mark or a question mark, e.g.. 1. Rd2xd4! or 1. ... Nf5-d4?
The exclamation mark means a good move.
The question mark means a bad move.

The name of the reminder - if given - and the exercise sheets of the relevant lesson can be found in the exercises under the heading Workbook. The diamond is the name of the reminder, the square is the name of the exercise sheet. They can be found in the workbook that is meant for the students.
$\checkmark$ Attacking and capturing
$\square$ Rules of the game / Castling: $A \quad B$
The meaning of the pawn ( $B$ ) was explained on page 24.

## GOAL OF THE LESSON

- exploring the board
- learning about coordinates
- learning the names of squares
- introducing chess pieces


## PRIOR KNOWLEDGE

- reading


## ACQUISITION

## Concepts

board, square (white and black), file, rank, diagonal, diagram, coordinates, piece, starting (initial) position,

## Instruction

No one is likely to be entirely ignorant of chess in a new 'beginners' group. The children often already know the board from checkers, and a family member will have explained how the pieces go. Our experience is that those 'experts' like to help during the lessons and can be easily employed for this purpose. The rest of this lesson, i.e. exploration of the board and introducing the various pieces, will therefore have to be adjusted to the group's level. Chess, just like checkers, is played by two players on a board (diagram $₫$ ). A chess board and a checkers board are about the same size, but a checkers board has 100 equal squares, a chess board 64 . For the sake of clarity, the squares alternate as light and dark. Irrespective of the colour (mostly

dark and light brown), we always talk about white and black squares. The board is correctly placed when a white square is in the lower right hand corner, i.e. 'white on the right'. Let the students check whether the board of their neighbour is placed correctly.
The demonstration board is simply a normal but enlarged board on which everyone can see everything better. Pieces will be set on the board: white and black ones. They are going to play against each other on the board, each piece on one square.
We can combine the presentation of the pieces (only the name!) with a little story about the origin of the game of chess. A few data are given at the end of the lesson under Information. The pieces may be set up on their initial square after they have been introduced. The initial position will then be 'populated' slowly. A student may set up the black pieces on the board. They will stand directly opposite the white pieces. In the diagram ( $\Leftrightarrow$ ) you will find the correct initial position. Point out the differences between real pieces and the pieces of the demonstration board; their similarity is obvious.

## Giving names to squares

It is handy for the chess lessons to be able to name squares. This identification of squares may be allotted some brief attention. The students then will learn the names without effort during the course of the chess lessons. To enable us to follow all events on the board well, all squares have a name (diagram $\sqrt{\Omega}$ ).
The letters $\boldsymbol{a}$ through $\boldsymbol{h}$ are found on the lower side of the board and on the right of


$\begin{array}{llllllll}a & b & c & d & e & f & g & h\end{array}$
the board the numbers 1 through 8. The position of the coordinates differs from board to board. The name of a square consists of a letter and a number. We find the name by first looking down and then to the right. Start by pointing out a square in the corner, e.g. hl. It is important that children imitate this on their own board. We already know that there is a white square in the right-hand corner. Check whether the students point out the right square and whether all boards are correctly placed.
Repeat this exercise, this time nominating a square in the middle of the board.
An exercise with other squares does not do any harm. Put a piece on the board and let them name the square (if necessary close to the edges first). In the diagram ( $\Rightarrow$ ) the white knight is located on square g 7 , the black queen on f 4 .
On some demonstration boards, there are also letters and numbers on top and on the left. We then have a choice. It happens that some of these boards have capital letters instead of small letters. Putting a sticker of small letters is a good solution. It prevents confusion later on when using notation.
The letters and numbers on some boards are only on one side, so that the black player sees all of them upside down. The explanation may be supported by analogy of streets and house numbers, or with forenames and family names. Experience shows, however, that this is not necessary. Useful concepts for the following lessons are: files, ranks and diagonals, the squares in a vertical, a horizontal and a sloping line, respectively. In the diagram ( $\Omega$ ) the cfile, the $7^{\text {th }}$ rank and the diagonal $\mathrm{d} 1 / \mathrm{h} 5$ have been indicated.


The speed and the total time required for the instruction do not only depend on the age and the knowledge that is already present, but also on the interest of the students. Giving names to the squares is not always exciting. Adapt the number of examples to your situation. It is sufficient if children know how we arrive at the name of a square. You do not need to have this knowledge in order to play a game of chess.

## Summary

Chess is played on a board. Parts of the board have a name: white and black squares, files, ranks and diagonals. The names of the squares are found by first looking for the letter and then for the number.
The chess pieces (king, queen, rook, bishop, knight and pawn) have their appointed place on the board. The game starts from the initial position.

## Practice

## Reminder

The board

## Exercise book

[^0]Board / Naming the squares: $B$
Explain: The circles, squares and diamonds have to be drawn on the correct square in the diagram.
Mistake: Wrong squares were indicated. Incidental mistakes occur most of the time because the children work too quickly or without concentration.
Help: Let the student read through the reminder or allow another student to help.

## ANSWERS



Board / Naming the squares: A

| 1) | f3 | a8 | c6 | 7) | f6 | bl | d5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2) | g8 | e7 | c3 | 8) | d8 | g4 | e6 |
| 3) | g4 | d5 | c2 | 9) | g5 | b4 | c6 |
| 4) | c5 | h5 | b2 | 10) | f4 | e6 | b7 |
| 5) | e3 | d6 | b7 | 11) |  | h5 | e2 |
| 6) | d4 | f5 | c2 | 12) | f7 | b6 | dl |

## INFORMATION

The most important piece is the king. The king was called Shah in Persia. The game of chess owes its name to him. He can be easily recognized by the cross on his head.
The queen was the weakest piece in the original version, she advised the king as a counsellor. She was changed into the strongest piece during the Renaissance.
The bishop developed from the elephant, and is still called 'elephant' in Russian! It was in the past featured with twisted tusks that pointed to each other. The French mistook these tusks for a fool's cap (cap ' $n$ ' bells), and therefore called the bishop 'fou' (= crazy). The English thought the tusks were a bishop's mitre, and called the piece 'bishop'. The Netherlands and Germany took it for a courier ('loper' and 'Läufer').
The horses have been horses from the start, sometimes with a rider or a knight, which is why that has become the name in English.
In the original version, people used chariots for the rooks. These were changed to their present form during the crusades.
Eight white pawns are placed in front of the above pieces. The pawns were the foot soldiers of the game as of old.

## How the pieces go

## GOAL OF THE LESSON

- learning the way chess pieces go
- learning the ranking order of chess pieces


## Prior knowledge

- naming chess pieces


## ACQUISITION

## Concepts

way pieces go, move, making a move, straight, diagonally, forwards, backwards, sideways, jump, game rule, game

## Instruction

We will now discuss the way the pieces go in the order of difficulty for the students. We will therefore start with the rook. They have to look for the rook in their own chess set. We put the rook on e4 (diagram $\sqrt{ }$ ) and show what the rook can do. The rook goes straight: forwards, backwards and sideways as far as you want it to go. We move the rook from e4 to b4. White has played a rook move. We play the rook to the other squares, to the middle, to the edge and into the corner. We show all the different possibilities on the board and give a running commentary.
The students can exercise the moves of the rook on their own board alone or in twos. In the latter case, they play a move in turn as White and Black. The rooks are not allowed to land on the same square.
Counting the number of possible moves

gives a good impression of the value of the pieces. On an empty board the rook can move from each square to 14 squares.
After the rook, it is the turn of the bishop which will receive the same treatment as the rook (diagram $\uparrow$ ). The bishop moves diagonally: forwards and backwards, as far as you want it to. Let them move the bishop from d5 one, two or more squares, forwards and backwards. Avoid that the bishop is only played to the edge. Ask for the shortest and longest bishop move (e.g. from a7 to b8, respectively from al to h8). Explain, then let them work by themselves. To keep the lesson fresh and varied, please call a student to the demonstration board to show a few moves.
Bishops are different. There is a bishop for the white and one for the black squares. They can of course never change their square colour. A bishop on b7 can never come to g 3 .
A bishop on d 5 may choose out of 13 squares on an empty board. That is its maximum. There are only 7 squares possible from al or bl.
After having dealt with rook and bishop, it is only logical that the queen is next in line. She can play like the rook and like the bishop. The queen in the diagram ( $\sqrt{ }$ ) can move both straight and diagonally, in all directions, as far as you want her to go. She can move in eight different directions from the middle of the board. If she stands on e5, then she covers at least 27 squares on an empty board. In the corner, the queen has to be satisfied with 21 squares. The queen can do a lot and she is therefore very strong.
The way the knight moves is the most com-

plicated of all pieces. There are several ways to explain its movement. We have chosen for one diagonally, one straight (one straight, one diagonally is also possible). Children may have learned the move of the knight differently. The way a knight moves also imitates (follows) the letter L. It does not really matter what way a student uses, but teaching them more than one way will create confusion.
The move (or jump) of the knight must be demonstrated well and several times. The knight jumps in the diagram ( $\Rightarrow$ ) from d4, always to a square of a different colour. In order to make the visual image and the control easier, it is recommended to put pawns on all the squares where the knight may jump in one move. Put extra emphasis on the word jump in order to eliminate illegal moves like Nd4-e4 (after moving incorrectly one diagonally and one straight). A knight in the centre of the board gives a nice circle; but half a circle also suits our purpose.
It is unfortunate that some children continue to have problems with the knight jump. A good visual prop is a 'board' of $3 \times 2$ squares (standing and lying). That can be simply drawn and cut. On such a board a knight jumps from one corner to the other corner.
The way the king moves is easy again. We deal with him last in order to let the students become used to the unique position of the king in chess. In the diagram ( $₫$ ) the king on f3 may move straight and diagonally, but only one square per move. Do not only place the king in the middle of the board, but also at the edges and in a comer. Also show a king of the other colour.


Counting the various options gives the students a good first impression of the activity of this piece.
The concept of check will be introduced at a later stage. The way the pawn moves is left for another lesson. It takes a while before the students are sufficiently familiar with the way the pieces move. Allow the children to play as much as possible with the pieces!
A rough knowledge of the value of the pieces is indispensable for the following lessons. The students should make an order of ranking. The probable order that they will give is queen, rook, bishop, knight, king. The queen is worth the most, then the rook. Knight and bishop are roughly worth the same because each bishop only can come on one square colour. A point list will be introduced at a later stage. A rough ranking list is sufficient for the moment, their relative worth comes in lesson 10.

## Summary

The rook, bishop, queen, knight and king each move in their own way over the board. The pieces differ in their importance and value.

## Practice

## Reminder

$\diamond$ Moves of the pieces

## Playing format

Knight's jump
The first game! The players make a move in turn and White starts just like in a real
game.
In the position in the diagram ( $\uparrow$ ) the white and the black knight must 'eat' the pawns of the other colour. That means capturing them, and although this will be only covered in the next lesson, this inconsistency does not pose any problems in practice. The knights are not allowed to capture each other.
Whoever has captured the most pawns is the winner.
The purpose of this game is to exercise the way the knight jumps in a playful manner. This is a very useful exercise.
Variation: Both players have two knights.
The game may be repeated after the following lesson has been covered. The knights could then be allowed to capture each other.

## 'Making circles'

Each player has two pieces (a rook and a bishop). The children have to return these to their original square in the diagram ( $\Rightarrow$ ). The pieces have to move clockwise. The area in the middle of the square is the 'inner circle'. That part of the board serves as a barrier. This block of pawns serves our purpose very well (draughtsmen will do too, if they are at hand). Capture is not allowed, and to stand with two pieces on the same square is of course not permitted either. The aim of the game is to let the children exercise the way the pieces move.

Variation: Add the queen and a knight and let these play as well. The maximum is four pieces for each player.


## Initial position

All pieces are in the wrong position in the diagram ( $\uparrow$ ). The aim of the game is to bring the pieces move by move to their correct place in the initial position. The pieces are not allowed to move beyond the middle half of the board (i.e. $4^{\text {th }} / 5^{\text {th }}$ row). It is not necessary to erect a barrier. Whoever reaches the initial position first wins. White begins.
This is a nice game where the children not only exercise the way the pieces go, but in which they will learn to remember the initial position in a playful manner. Even children who already know the way the pieces move a bit longer, will play this game with relish.
The game can also be played individually with only the white pieces.
The children have not yet memorised the initial position. This position should therefore stand on the demonstration board during the game (on the white side give the position they are starting from, on the black side the initial position, which they are trying to achieve). It is also possible to consult the reminder 'The board'.


## Workbook

$\square$ Rules of the game / Moves of the pieces: $A$
Explanation: All squares to where the piece may move in one move get a plus sign.
Mistake: The squares in between (from where and to where the knight moves) get a plus sign (a knight on e4 can jump to f5 and f6).
Help: The knight is compared too much to other pieces; therefore the jump has to be explained one more time. Ask once more how the knight moves and set up pawns help.
Mistake: A piece can play unexpected moves. There are too many plus signs for the moves of various pieces.
Help: After a few plus signs have been written down by the child, one of them has been taken as a starting point. Ask him if the piece shown is allowed to go to the square with the wrong plus sign. He will then often realize his mistake.
Mistake: Too many plus signs when the queen is discussed.
Help: The queen can do 'anything' has been taken too literally. Asking once more how the queen moves is often sufficient.
Mistake: The bishop moves to a square of a different colour. A white-squared bishop becomes a black-squared one.
Help: "Have another look!" Carelessness is often the cause.

## ANSWERS

## Rules of the game / Moves of the pieces: $A$

1) Rb4: b1, b2, b3, b5, b6, b7,
b8, a4, c4, d4, e4, f4, g4, h4
2) Bd7: a4, b5, c6, e8, c8, e6, f5, g4, h3
3) Ne 4 : c3, c5, d6, f6, g5, g3, f2, d2
4) Qg7: a7, b7, c7, d7, e7, f7, h7, g1, g2, g3, g4, g5, g6, g8, f6, e5, d4, c3, b2, al, h8, f8, h6
5) Kb3: a2, a3, a4, b4, c4, c3, c2, b2
6) Ng5: e4, e6, f7, h7, h3, f3
7) Rh8: a8, b8, c8, d8, e8, f8, g8, h1, h2, h3, h4, h5, h6, h7
8) Qe4: a4, b4, c4, d4, f4, g4, h4, e1, e2, e3, e5, e6, e7, e8, d3, c2, bl, d5, c6, b7, a8, f3, g2, h1, f5, g6, h7
9) Ke8: d8, d7, e7, f7, f8
10) Na7: b5, c6, c8
11) Drawing
12) $\operatorname{Rg} 2: ~ a 2, b 2, ~ c 2, ~ d 2, ~ e 2, ~ f 2$, h2, g1, g3, g4, g5, g6, g7, g8

## 3

 Attack and capture
## GOAL OF THE LESSON

- learning the interaction of chess pieces


## Prior knowledge

- the way chess pieces move
- order of rank of chess pieces


## ACQUISITION

## Concepts

attack, capture, jump, mobility, vulnera-
bility, mutual

## Instruction

In case the students have problems with any of the issues that were covered in the previous lesson, the prior knowledge should be repeated. The easy pieces only need to be covered briefly. Many of the children will still make knight moves with hesitation.
In this lesson, both players' pieces will be standing opposite each other for the first time and influence each other. This interaction means that the opponents must watch two pieces. That requires attention. Indicate in the diagram ( $₫$ ) that the rook looks at the bishop. In this case, we say that the rook attacks the bishop. If it is White's turn, he can capture the bishop with the rook: the rook will then take the place of the bishop on b7. The bishop disappears from the board and does not take part in the game any longer. In short, the rook has captured the bishop.


The black bishop on the right side attacks the knight. He can capture the knight.
Give a few more examples with other pieces. Replace white with black pieces, and vary between forward and backward captures. You will find out that backward captures are more difficult, as are captures over a relatively longer distance. On the left side in the diagram ( $\uparrow$ ) the queen attacks the rook.
In the upper right side of the split diagram the bishops attack each other. In this type of position, which bishop can capture the other depends on whose tum it is to move.
In the lower right side the king can capture the knight. Let one of the students come to the demonstration board to point out the attack and to make the capture.
Capturing is not obligatory! Capturing is, however, subject to certain rules. In the following examples, we will discuss when capturing is not permitted.
In the diagram ( $\Leftrightarrow$ ) the queen attacks the knight, but not the bishop. This can be further illustrated by replacing the black knight by a white one (diagram right).
Captures by the knight require special attention. Besides 'normal' capture, the knight is able to capture by 'jumping over other pieces'.
On the left side in the diagram ( $(\downarrow)$ the black knight captures the white rook. Nothing special.
In the right side of the diagram, the knight on f 3 can capture both the rook on e 5 and the bishop on $h 4$. It does not matter that there are pieces 'in the way' on e4 and f4. The knight can jump over both one's own and enemy pieces. Children (and especially young ones) have trouble with jumping

captures. To them, the pieces really stand in the way. They take the knight, move it to e4, see an obstacle and then move it the other way. The game 'Which knight eats the quickest', which will be outlined at a later point in this lesson is a good exercise in this respect.
Finally, we completely lock up the knight on e3 in the diagram ( $\uparrow$ ) and only give it one exit ( f 4 ). If children now also let it play eight moves without hesitation (including two captures), then they will have grasped the concept of capturing with a knight.
We let the children participate on their board as much as possible. We should realize however that the job of transferring relatively complicated positions on the demonstration board to their own board is quite difficult for the children.
Attacking pieces should be done with the necessary care. When doing so, you have to make sure that the attacking piece cannot itself be captured. In the diagram ( $\Rightarrow$ ) the queen has to attack the rook in a safe manner. This can only be accomplished by means of a diagonal attack. A good move is e.g. 1. Qb3-d5. In contrast, the queen must attack a bishop straight by means of a vertical or horizontal attack.
In the right side of the diagram, it would not be clever if Black attacks the white rook with his own rook (e.g. 1. ... Rf7-g7). But Black can safely attack the white bishop by playing 1. ... Rf7-h7 (or f4).
When it comes to attacking, the knight once more has an exceptional status. A knight can attack any other piece without being captured itself.
During 'attacking actions', you will generally find more than two pieces on the

board. Each extra piece means more and more complex interaction! Other pieces of the opponent may act as spoil-sport when attacking a piece yourself.
In the diagram ( $\uparrow$ ) the bishop on f 3 could attack the black rook from either c6 or g 4 . The black knight can capture the bishop if it moves to c6. This attack is therefore unlikely to be successful. Thus, the correct attacking move is 1 . Bf3-g4.

## Summary

Enemy pieces that are under attack, may be captured. That is not a duty. However, capturing is not obligatory.
The queen, rooks and bishops cannot jump over other pieces. A knight jumps and, when doing so, can capture enemy pieces. The opponent can attack your pieces too and capture them! If you attack an enemy piece, you should do so with care: make sure that an enemy piece cannot capture your attacking piece.

## Practice

## Reminder

$\diamond$ Attacking and capturing

## Playing format

Queen against knight
In the diagram ( $₫$ ) the queen must conquer the knight. The knight can only be caught on the edge and on some squares close to the edge of the board.
The children switch colours after each game. It is also possible for the teacher to play the side of the knight simultaneously

in small groups.
The concepts of mobility (knight in the centre) and vulnerability (knight more towards the edge) play a role. In the beginning the children will play rather at random. We can come back to this little game after a few lessons. By then, the children will play much more focused.

## Capturing

In the diagram ( $\uparrow$ ) the pieces must capture the buttons or coins (pawns are less suitable because of their colour).
The idea is to capture as many as possible without being captured yourself. Jumping over the counters is not allowed.
The importance of the centre (squares $=d 4$, d5, e4, e5) becomes apparent in this little game.
Variation: Both games have an extra rook.

## Queen + rook against bishop

A white queen and rook have to catch a black bishop (diagram $\Rightarrow$ ). They may start from the square that they occupy in the initial position. This chase will only succeed with correct play if the rook is exposed (but protected!), but almost no child will think of this on his own accord. If catching the bishop does not succeed, then an extra rook needs to be added to do the job. This is a difficult exercise, and therefore only suitable for your better student.

## Knight's jump

This exercise was outlined in lesson 2 above. Both players have two knights and the knights are now allowed to capture each other.


Which knight 'eats' the quickest?
The diagram ( $\uparrow$ ) comes about by replacing both kings by one of their opponent's knights. Only these knights are allowed to play in this exercise. They have to capture all the enemy pieces surrounding them as quickly as possible. Whoever has 'swallowed' all of them first, wins. Not easy, but nice and instructive. Even at step 5 level, the person who begins will not always win.


## Workbook

$\square$ Rules of the game / Moves of the pieces: $B$
Explanation: The students have to write a plus sign on the squares where the indicated piece can go in one move. The enemy piece that can then be captured will get a circle.
Mistake: Capturing your own pieces.
Help: As a result of the dedicated effort to capturing, other factors are forgotten. Capturing is a nice job and the more captures the better! Setting up the diagrammed position on their own board is a good prop. Let them make the move, and ask: "What piece do you capture?" and "Take a good look at that."
Mistake: Capturing too few pieces.
Help: $\quad$ The child is already content after capturing one piece. His reasoning: you are only allowed to capture one piece at a time! Set up the position and ask what other pieces can also be captured.
Mistake: Queen, rook and bishop can jump.
Help: $\quad$ The error could be caused by unfamiliarity with this aspect. What is more likely however, is that the student identifies himself with the wrong piece (e.g. the piece that he has just captured). It is sufficient to point out that the same piece must play every time.
$\square$ Attacking / Creating an attack: A
Explanation: This exercise sheet requires a good introduction. The point is that, rather than investigating all possibilities, the
student must find the best solution. In addition, the opponent is not harmless anymore: he gets into the discussion too, as will happen in almost all positions that will follow. Choosing the right approach from the start will pay off!
The students must first look for all possible attacks in the diagram (setting a plus sign on the squares is enough). They can find the best move by comparing all possible attacking moves. The condition is that their own piece cannot be captured. Therefore the motto is: attack safely! The correct move will get an arrow. In some of the diagrams an extra complication is: Which piece should attack?
Mistake: The piece that attacks can itself be captured.
Help:

Mistake: Position 8 or 10 is wrong.
Help: There is a correct attack but the opponent is able to capture a piece with the attacked piece (see answers). We make the move on the child's own board and ask: "What can the opponent play now?"

## ANSWERS

Rules of the game / Movement of the pieces: $B$

1) d2, e5, g1, h2, xh4, xg5
2) $\mathrm{c} 4, \mathrm{e} 6, \mathrm{f} 7, \mathrm{~g} 8, \mathrm{e} 4, \mathrm{xb} 3, \mathrm{xf} 3$
3) g3, g5, g6, f3, f5, h3, h4, h5, $\mathrm{xe6}, \mathrm{xg} 7$
4) $\mathrm{c} 4, \mathrm{~b} 4, \mathrm{e} 4, \mathrm{xd} 5$
5) $\mathrm{c} 8, \mathrm{e} 8, \mathrm{f} 5, \mathrm{f} 7, \mathrm{xc} 4, \mathrm{xe} 4$
6) d5, e6, e7, e8, d4, f6, f4, xc3,
7) e1, e3, e4, e5, e6, e7, e8, a2,
xe4, xf5, xg3 b2, c2, d2, f2, g2, h2, d1, f1,
8) c6, c8, a7, b7, d7, e7, f7, g7, xd3
h7
9) drawing
10) d2, f4, f2, gl, xg5
11) b2, cl, el, f4, xc5, xe5
12) c4, c3, c6, c7, d5, xb5, xc2

Attacking / Creating an attack: A

1) $1 . \mathrm{Be} 2-\mathrm{g} 4$
2) 3. $\mathrm{Ne} 4-\mathrm{f} 6$
1) 2. ... Rd5-d1 or 1. ... Rd5-e5
1) 2. ... Qd5-d2 or 1. ... Qd5-f7
1. ... Qd5-a2
5) $1 . \mathrm{Rb} 8-\mathrm{d} 8$
6) $1 . \mathrm{Nb} 7-\mathrm{d} 6$
7) 8. Be2-h5
1) 2. $\mathrm{Rg} 2-\mathrm{g} 6$ (1. Ne2-d4?

Bc6xg2)
9) 1. ... Nc5-d3
10) 1. Ba5-b4 (1. Bc6-e4 Rf5xa5)
11) 1. ... Qa8-h8
12) $1 . \mathrm{Bg} 2-\mathrm{d} 5$


## GOAL OF THE LESSON

- learning the possibilities of the pawn


## Prior knowledge

- knowledge of the other chess pieces


## ACQUISITION

## Concepts

double step, promotion

## Instruction

This lesson should be given when the students have complete mastered the way the other pieces move.
Many people think that the pawn is the easiest chess piece. That is not correct. The pawn is quite different from the other pieces because of the many exceptions. Treating it separately is therefore necessary. To vary the way that the teaching material is presented, we do not cover the pawn immediately after the other pieces. The pawn moves straight ahead, one step at a time; the pawn has the right (not the duty), to move a double step, but only in the initial position. The pawn on b2 in the diagram ( $\Omega$ ) may choose to move one or two steps forward. The pawn on c5 has lost its right to move two steps forward and can only move one step forward. The pawn on g3, too, can only move one step forward.
After explaining how a pawn moves, a few students could show the pawn move on the demonstration board. The pawn captures

forwards diagonally. This makes the pawn the only chess piece that captures differently from the way it moves.
The different possibilities are illustrated in the diagram ( $\uparrow$ ). The c-pawn may capture on d 5 or move to c 5 . The pawn on h 2 may move one or two squares forward. It is not allowed to capture the bishop on g4. The pawn on a6 cannot move, because its path is blocked by the knight on a7.
We now set up the diagram ( $\Rightarrow$ ) and play 1. d7-d8. A pawn that reaches the other side of the board changes into a queen, rook, bishop or knight of its own colour. Emphasize that the pawn cannot remain on that square and that the pawn cannot change into a king. We call this promotion. In the beginning, it is better to avoid the term 'to queen'; the other pieces may be selected too.
Pawns cannot move backwards. They can only move 5 or 6 times and get blocked quite quickly. Set up the e-pawns in their initial position on an empty board. White plays 1. e2-e4 and Black plays 1. ... e7-e5. The pawns cannot move anymore. A suitable question the children could think about is: "When can pawn e4 play again?" In the diagrams on the exercise sheets and on the demonstration board, Black always plays from above downwards. We never make an exception in order not to confuse. We also look at the possibilities of the black pawn using the diagram (』). Pawn b7 may move one or two squares forward; it is not allowed to capture the knight on c5. Pawn b2 may be promoted on b1 or by capturing on cl. Let the children explain how the pawn may have arrived on b2. The pawn on e5 has a choice of capturing the

queen or the rook, or of moving a step forwards. Capturing 'en passant' (capture while passing) will be covered at the end of the first step, in lesson 14.
We conclude the lesson by repeating how the initial position should be set up. A playful way is to play together starting with the 'Initial position' from lesson 2, at first with the white pieces only.
In the diagram ( $\uparrow$ ) we give two possible options. Of course, the white and black positions must be identical when you start playing.
The easiest way to learn how to set up the board is by starting with an empty board and fill it from the edges inwards: first the rooks, then the knights and bishops. Setting up the queen and the king only can be confusing. The white queen stands on a white square, the black one on a black square. That is, the queens 'keep their colour.' The eight pawns are then positioned in front of the pieces (see diagram $\Rightarrow$ ).
Point out that the white pieces always have to stand on the first and the second rank. We will stick to that principle throughout the course; it prevents confusion so that pawns do not move the wrong way.

## Summary

A repetition of the rules of the pawn:

- going straight
- capturing diagonally
- a choice between 1 and 2 steps at the first move
- promotion
- the only chess piece that never moves backwards



## Practice

## Reminder

$\diamond$ The pawn

## Playing format

## Pawn play

Eight pawns against eight pawns play from their initial position (diagram $\widehat{\diamond}$ ).
Whoever promotes first wins. You also win if your opponent cannot move anymore. The students will switch colour after every game.

## Bishop or knight versus pawns

In the diagram ( $\Rightarrow$ ) on the left, the side with the pawns begins. The pawns win with good play, but in practice it is often the bishop side who wins. The bishop could nail the pawns down, after which the obligation to make a move will result in the loss of the pawns. The students will discover themselves that it is better not to capture a protected pawn (to be discussed in the next lesson).
The pawn player wins when a pawn promotes or when the bishop is captured. The bishop player wins when all the pawns have been captured or when the last pawn has been nailed.
The knight on the right has a lot more difficulties against three pawns. It is therefore allowed to begin. With correct play the pawns will win easily.

## Queen against pawns

In the diagram ( $₫$ ) the queen has to do battle against eight pawns. This pawn mass looks enormous, but a smart student will

capture all the pawns quickly. During the course of play the student will discover the difference between protected and unprotected pawns. To capture a protected pawn will cost the queen. This little game can best be demonstrated in a simultaneous display. The teacher plays the side of the pawns.

## Promotion game

The eight pawns in the diagram ( $\Rightarrow$ ) have to be moved to the other side. A pawn that promotes counts for one point (use the black pawns to keep track of the score), and disappears from the board. The knight has to capture as many pawns as possible and avoid being captured itself. The players will play a 'best-of-two' match, one with the pawns, and one with the knight. The player with the most points after two games is the winner.

## Initial position

The game from lesson 2 remains interesting for the students. More difficult variations are:

- The initial position but with a twist (the bishops must stand on squares of a different colour!) An example can be found in the diagram ( $₫$ ). The minimum number of moves in this position is 18. Another example: Khl, Qgl, Nf1, Nel, Rdl, Rcl, $\mathrm{Bbl}, \mathrm{Bal}$. In this case, the minimum number of moves is 15 .
- The students invent an initial position themselves. White sets up a piece, Black sets up the same piece in a straight line on the other side of the board. Then Black sets up a piece, White sets up the same piece on the other side, etc. Point

out that the bishops must stand on squares of a different colour.
- Let the students construct a position from which the initial position can be reached as quickly as possible. This is a real popular assignment for the student. In the diagram ( $\uparrow$ ) we have shown the position that will allow the children to reach it quickest. From this position, the initial position can be reached in 12 moves. This is the minimum number of moves that is required, providing that
 the starting position does not contain any pieces that occupy their original square. Another challenge for the most advanced kid in the group is to construct the maximum number of moves. With good play, the maximum number of moves is 18 .


## Workbook

$\square$ Rules of the game / Moves of the pawn: A B
Explanation: The students must write a plus sign for all possible pawn moves. The pieces that can be captured get a circle. Indicate that pawn moves are not always possible.
Mistake: The pawn moves are in the wrong direction.
Help: Explaining the rules once more is the obvious solution. The cause of this mistake is that the student has missed the relationship between the starting point of the pawn and the position of the board. Keep telling him that White's initial position starts on the $1^{\text {st }}$ rank and Black's on the $8^{\text {th }}$ rank. They will quickly correct these direction problems in the exercises. The problem may persist for a longer period during games, however.
Mistake: The pawn jumps or makes other illegal moves.
Help: These errors only occur in positions in which no pawn move is possible. Point out that pawns are sometimes unable to move.
$\square$ Attacking / Creating an attack: A
Explanation: The piece next to the board has to be inserted in such a way that a good attack is possible. The inserted piece itself should, of course, not be captured. If by any chance more than one piece can be attacked, the attack on the most important piece counts. The piece to be attacked should be unprotected; the students understand this even though they do not yet know what unprotected means.
Mistake: The inserted piece can be captured.
Help: The cause is often that the student is focussed too much on his own action. We set the piece on their own board and ask: "What can the opponent now play?"
Mistake: The attacked piece is protected.
Help:
Set the position up on the board. Let the child capture the attacked piece with the piece that they have inserted and ask them what the opponent will now play.

## ANSWERS

Rules of the game / Moves of the pawn: A

1) f6, f5
2) $\mathrm{a} 3, \mathrm{a} 4$
3) elQ, xdlQ, xflQ (R,B,N) 12 possible moves
4) d 4
5) Drawing
6) d5, xe5
7) no pawn move possible
8) e3, e4, xd3
9) xb 4
10) d6, xc6, xe6
11) $b 5, x c 5$
12) $\mathrm{c} 8 \mathrm{Q}, \mathrm{c} 8 \mathrm{R}, \mathrm{c} 8 \mathrm{~B}, \mathrm{c} 8 \mathrm{~N}$
$\square$ Attacking / Creating an attack: $A$
13) rook on the $2^{\text {nd }}$ rank or on the
14) Ra3, c3, h3 g -file.
15) Nc3, e3, f4, f6, e7, c7, b6, b4
16) $\mathrm{Qb} 2, \mathrm{c} 3$
17) Bishop on $a 2 / \mathrm{g} 8, \mathrm{fl} / \mathrm{a} 6$
18) $\mathrm{Ka} 7, \mathrm{a} 8, \mathrm{c} 8$
19) Be6 or Ld7
20) Qg8, Qh6
21) Nd5, e8, g8, h7, h5
22) Kg8
23) Nb 6

GOAL OF THE LESSON

- reacting to an attack


## Prior knowledge

- attack and capture
- rank of pieces


## ACQUISITION

## Concepts

defend, protect, move away, interpose, protected piece, unprotected piece, material

## Instruction

At the beginning of this lesson, it is important to check whether the children have mastered the concept of 'attack'. Let them think of a few positions on their own board.
Diagram ( $\Rightarrow$ ) may be used to defend by 'moving away'. The knight on c5 is attacked by the queen. It can move away to $d 7$, b7, a6 or a4. It will be clear that the knight's moves to b3, d3, e4 or e6 are out of the question. On those squares the queen still can capture the knight.
When we add a black rook on g8 (diagram』), Black can defend himself not only by moving away but also by 'protecting' the knight. Black plays the rook to c8. At this point it is good idea to repeat the order of ranking of the pieces (see lesson 2). The queen is worth more than a knight; therefore, White will not capture with his queen on c5. An incorrect way of protecting is 1 .

... Rg8-g5. Although the rook on g5 protects the knight, it is itself unprotected, and can be captured by the queen.
The example in the diagram ( $\uparrow$ ) is similar. The black bishop on the left is attacked by the white rook. Black can protect the bishop by 1. ... Nc2-a3 or he may move with his bishop away: 1. ... Bb5-a4. The protecting move 1. ... Nc2-d4 is wrong. Whereas this succeed in protecting the bishop, the knight can now itself be captured. Anticipating your opponent's moves (watching his game) is an important facet of the game of chess. We have to emphasize this to the children.
The black queen attacks the white knight on the right. Allow the children to look for the two correct answers and let them make the moves on their own board (1. g3-g4 and 1. Nh5-f4).
Anticipating the moves and watching the opponent's game is hard for beginning chess players. All their attention is devoted to the protection of their own pieces while other factors are ignored. In this example the board is rather empty. As a result, this problem will not be that apparent. However, in case of positions that involve more pieces, and particularly during real games, this problem - a false 'sense of security' will become more serious.
A third way to defend is by 'capturing'. There are two forms of capture: the threatened piece can capture the attacker itself, or another piece can capture it. In the left side of the diagram (』), both knights attack each other. We call this a mutual attack. We point out that the white knight is protected and the black knight is unprotected. Black may move his knight away, protect it

by playing his pawn to b6, or capture the white knight.
On the right side, the rook on e4 is in danger of being captured. White can move the rook away or the bishop can capture the knight. Both methods are correct.
Let the student set up positions that involve an attack themselves. The student next to him may then point out the various ways in which the attacked piece can be defended. He then thinks in turn of a new example. Note that, a helping hand by the teacher will certainly be necessary here.
In the diagram ( $\Leftrightarrow$ ), the fourth way to defend: 'interposing' is illustrated.
The threatened queen on g 2 may move to f2 (smart), capture the bishop (stupid, as the queen is worth more) or we can place the pawn in the line of attack by 1. e3-e4. We include interposing for completeness' sake. In games of beginners interposing occurs primarily in order to get out of check. This manner of defending will be dealt with more extensively in lesson 6. You may safely leave interposing out of the lessons for the time being. It is not included in the exercises for this lesson. We do not use the term 'interfere' in this context, since we reserve this term for another aspect (see step 4).
The ways to defend that we have covered so far are summarised in the diagram ( $(\mathbb{})$. The attacked knight may move away to 4 . White can also capture the attacker by 1. Qc3xa5 or protect it e.g. by 1. Qc3-b2. Another special way to protect, which appears on the exercise sheet but is often overlooked in practise, is possible: White may play 1. b3-b4 after which the knight on a 3 is protected. The pawn that plays

does not protect the knight itself, but clears the way for the real defender. We refer to this method of protecting as 'clearing'.
On the right in the diagram the knight on h 6 is in danger. It does not have a safe square to go to. The queen covers all the escape squares. Only by moving the fpawn forward is White able to save his knight.
In the last example in the diagram ( $\uparrow$ ), the students should count the number of correct moves for White:

- move away: Re2, Rg2, Rh2
- capture: Rxf7
- protect: Ke3, Ke2, Ke1
- protect by clearing: $\mathbf{d 5}$
- protect by moving the attacked piece itself: Rf4, Rf6
This last, alternative way of protection is not considered in the exercise sheets.


## Summary

You may defend yourself against an attack in four ways: by moving away, protecting, capturing, interposing. In some cases more than one way is correct. You can safely capture pieces that are unprotected.

## Practice

## Reminder

$\diamond$ Defending

## Playing format

Who retains anything?
The students must attack and defend with equal material, e.g. the material proportion shown in the diagram ( $₫$ ). Whoever has captured everything, wins.


Variation 1:
Material on different wings (the pawns in that case do not have any enemy pawns blocking their path).
Variation 2:
Other piece(s) than the knight.

## Who retains anything?

The students must attack and defend with unequal material (diagram $\uparrow$ ).
Whoever captures everything wins.


Variation 1:
Begin the game from a different initial position.

## Workbook

$\square$ Defending / Protecting: A
Explanation: In order to promote a good orientation, the students should first circle the attacked piece. Only then they are allowed to draw an arrow for the correct protecting move. It is of course necessary to solve the assignments one by one. All positions have been made in such a way that only defence through protecting is the correct solution. There is further only one good answer for each diagram.
Mistake: The attack is not recognized because of limited insight or because they do not yet have a sufficiently developed sense of danger.
Help: Let them set up the position on their own board and ask: "Is this piece attacked? And this one?"
Mistake: $\quad$ The protecting piece can be captured. Beginners concentrate completely on protecting the piece and do not devote any attention to other facets.
Help: Do you see a good move for the opponent?
$\square$ Defending / Moving away: A B 8
Explanation: We let the students first make a circle around the pieces that are in danger. They must then find a safe square for the attacked piece. Only then should they draw an arrow
to indicate the correct move (that may be a capturing move). A rough knowledge of the value of the pieces is necessary to get the correct solutions. The queen is the most valuable piece, the rook is more valuable than a bishop or a knight. A piece that is attacked by a pawn is always in danger.
The attacked piece in the last three positions may only be played to square where it is protected by a friendly piece.
Mistake: The piece can be captured.
Help: Set up the position. "Do you see a good move for the opponent?"
Mistake: The problem is too difficult. The student cannot find a square for the threatened piece.
Help: $\quad$ The attacked piece in positions 10,11 and 12 can only be played to a protected square.
$\square$ Material / Capture an unprotected piece: A B
$\square$ Material / Capture an unprotected piece: B \& $B$
Explanation: Let them make a circle around all attacked pieces. That promotes a good orientation. After a comparison between the protected and unprotected pieces, the students draw an arrow for the correct move.
Mistake: Capture of a protected piece.
Help: It depends on the cause of the mistake:

- The pieces are lumped together; the piece appears to be safe.
In this case the position can be simplified by removing a few pieces.
- The captured piece is protected at a distance.

The student should study the options open to the opponent more closely after the erroneous move is played. That brings a new assignment: to capture an unprotected piece. If the student still does not see it, the protecting piece may be moved closer.
$\square$ Defending / Capture the attacker: $A \quad B$
Explanation: The piece being attacked is able to defend itself by capturing. An easy sheet.
Mistake: The exercise is wrong.
Help: Look at the exercise sheet 'Capture an unprotected
$\square$ Test / Repetition: A
Explanation: The positions on this exercise sheet have been made before. It is a good test to discover what part of the material the student still has trouble with.
Mistake: The exercise is wrong.
Help: It is good to differentiate between the various mistakes made. Has a game rule been forgotten or has a basic skill like capturing or defending been applied incorrectly?
$\square$ Test/Mix: A

## \&

Explanation: The themes of the exercises are indicated under the diagrams, therefore we cannot really consider this a real mix. Most students will therefore obtain a good result. It is to be recommended that teacher and students solve an example after the style of 6,7 and 8 together.
Mistake: Material will be lost.
Help: $\quad$ Set up the position on the board. Ask what the opponent would be able to play now (usually capturing an unprotected piece). Then study the position once more.
Mistake: Position 6, 7 or 8 is wrong.
Help: The student has to look at all the opponent's pieces. Review all possible moves of the pieces one by one and check whether the squares are attacked or not.

## ANSWERS

$\square$ Defending / Protecting: $A$

1) 2. c2-c3
1) $1 . . . . \mathrm{Ng} 4-\mathrm{f} 6$
2) $1 . \ldots \mathrm{g} 7-\mathrm{g} 6$
3) $1 . \mathrm{Kgl}-\mathrm{g} 2$
4) $1 . \ldots . \mathrm{Ka} 8-\mathrm{b} 8$
5) $1 . \mathrm{Nc} 3-\mathrm{d} 5$
6) $1 . \mathrm{Rfl}-\mathrm{cl}$
7) 8. ... f6-f5
1) $1 . \mathrm{Bf} 2-\mathrm{d} 4$
2) 3. Rd4-d3
1) $1 . \mathrm{Nbl}-\mathrm{c} 3$
2) 3. Nc3-e2
$\square$ Defending / Moving away: $A$
1) $1 . e 4-\mathrm{e} 5$
2) $1 . \ldots$ b6-b5
3) 4. ... Rd6-d8
1) $1 . \mathrm{Nd} 5-\mathrm{e} 3$
2) 3. Re5xh5
1) $1 . \mathrm{Qd} 5-\mathrm{a} 2$
2) 3. ... Bc5-e3
1) 2. Ne3-d5
1) $1 . \ldots \mathrm{Bg} 5-\mathrm{cl}$
2) $1 . \ldots$ Nb7-d6
3) 4. ... Qa5-c5
1) 2. Rf3-a3

Material / Capturing an unprotected piece: A

1) 2. Bc4xe6
1) 2. Qd2xa5
1) 2. ... Be7xg5
1) 1 . ... Qf7xfl
2) 3. Nc3xd5
1) 2. Kf3xe4
1) $1 . \ldots \mathrm{Ne} 4 \mathrm{xd} 2$
2) 3. ... Kg8xf7
1) 2. Rdlxd6
1) 2. ... d5xc4
1) $1 . \ldots$ Ra7xa3
2) 3. ... Bd4xb6

Defending / Capturing the attacker: $A$

1) $1 . \ldots \mathrm{Ne} 7 \mathrm{xd} 5$
2) 3. Re 2 xe 7
1) $1 . e 4 x d 5$
2) $1 . B g 5 x e 7$
3) $1 . \ldots f 5 x e 4$
4) 5. ... Sg 5 xf 3
1) $1 . \ldots$ Bc5xd4
2) 3. Qd5xd8
1) 2. ... Rc3xcl
1) 2. Nd4xe6
1) $1 . \ldots$ Be5xc3
2) 3. Re7xe8+

Material / Capturing an unprotected piece: B

1) Drawing
2) 3. ... a6xb5
1) 2. d 4 xc 5
1) 2. Qd2xh6
1) 2. ... Re8xe2
1) $1 . \mathrm{Bg} 2 \mathrm{xa} 8$
2) 3. ... Rf8xf3
1) 2. ... Nd5xf4
1) 2. ... Qf3xhl
1) 2. Nd6xe4
1) $1 . \mathrm{Nd} 4 \mathrm{xc} 6$
2) 3. ... Qg 4 xd 7

Test / Repetition: A

1) $1 . \mathrm{Be} 6, \mathrm{Bd} 7$ 7) 1. ... Ra7xa3
2) 3. c8Q (R, B, N)
1) $1 . \mathrm{Kgl-g} 2$
2) 3. Nb7-d6
1) 2. ... Qe5-b8
1) $1 . \ldots \mathrm{Nc} 5-\mathrm{d} 3$
2) 3. Nb6
1) $1 . \ldots$ f6-f5
2) 
3) 
4) 5. ... Qf7xfl
$\square$ Test/Mix: A
1) 2. ... Nd7-b6
1) $1 . R e 4 x e 6$
2) 3. ... Nf6-d7
1) $1 . \ldots$ Bb6-d4
2) 3. ... Nd8xc6
1) b4, c4, e4, f4, g4, h4, d3, d2, d1, d5, d6, d7, d8
2) $+\mathrm{a} 2, \mathrm{c} 4, \mathrm{e} 6, \mathrm{c} 6, \mathrm{a} 8, \mathrm{e} 4, \mathrm{f} 3$, h1; - b3, b7, f7, g8, g2
3) $+\mathrm{a} 4, \mathrm{~b} 4, \mathrm{c} 4, \mathrm{a} 7, \mathrm{~b} 6, \mathrm{c} 5, \mathrm{~d} 5$, d6, d7, d8, e5, f6, e4, g4, h4, d3, d1, c3, al.
$-\mathrm{b} 2, \mathrm{~d} 2, \mathrm{e} 3, \mathrm{f} 4, \mathrm{f} 2, \mathrm{~g} 1$
4) $1 . \ldots$ Bf8xb4
5) 6. Bd6-g3 or 1. Bd6-f4; rather not 1 . f2-f4 because of 1. ... Qe4xe3.
1) 2. Nd5-c7
1) 2. Ne6xd4


## GOAL OF THE LESSON

- learning how to deal with an attack on the king (check)
- learning how to defend against check
- necessity of getting out of check


## Prior knowledge

- attack
- defence


## ACQUISITION

## Concepts

check, getting out of check, getting out of check, interpose

## Instruction

The king has a special function on the chess board. He always remains on the board until the end of the game. This lesson covers the attack on and defence of the king. It is useful to repeat the prior knowledge of attack and capture (without the king) with a few examples. Positions with a limited number of pieces from the exercises may serve as example.
In the diagram ( $₫$ ), the white rook looks at the black king: the king is being attacked. The attack on the king has a separate name: 'check'. We indicate that when the black king is in check, Black has to repel the attack on the king. The king moves one square to the right to g 8 and is not in check anymore. Let the students themselves give a few other ways to get out of check. We conclude that only $1 . \ldots \mathrm{Kf8}-\mathrm{f} 7$ is wrong,

because the king does not get out of check. On the left, the bishop gives check. Tell the children to set up a few more examples on their own board. The person next to them can point out the right moves.
In the left side of the diagram ( $\uparrow$ ), Black has more than one way to get out of check:

- He can move away with his king.
- He can capture the checking rook with his bishop.
The capturing move is of course the best option. We show all the different ways to get out of check by making all moves completely on the board.
A similar example is given on the right.
We apply the same approach in the position of the diagram ( $\Rightarrow$ ). There is a limited number of possible moves in both parts of the diagram. On the left Black has to capture the queen with his king; there is no other move (even though the occasional student might think that a5, not directly under White's control, still is a safe square). The king may therefore also capture the checking piece.
On the right White has to give his queen to get out of check. A pity, but there is no other option.
Thus far two ways to defend have been presented: moving away and capturing. From the previous lesson, we remember the option of protecting. That option logically cannot be applied when you have to get out of check. Protecting the king does not make any sense because the check will remain.
The fourth way of defending: 'interposing', is now introduced in the diagram ( $\downarrow$ ). The students will have no difficulty in finding the right moves in both parts (even if inter-

posing was not discussed in the previous lesson). On the left Black plays 1. ... Bb8-a7, and on the right 1. Nh3-g1 is the only move. Tell them to also invent a few positions in which a piece is interposed.
To make sure that the concept of getting out of check has become crystal clear, we will use the diagram ( $\uparrow$ ). The defending party may get out of check in both parts of the diagram in three different ways. In the upper part, Black can capture the queen, interpose his own queen or move his king aside (only Kf8 is correct so as to protect the queen). In the lower part, White can capture the rook, interpose the knight on e3 or move his king away, e.g. by playing 1. Kf3-e2.
In the exercises of this lesson the students should be able to tell which way to get out of check is the correct one. Two examples are presented in the diagram ( $\Rightarrow$ ).
On the left White is in check and a move by the king to a 2 or bl allows him to get out of check. This is not the best option, however, since then the bishop on b4 will be lost. In this case capturing is therefore the correct move.
On the right the knight on g 4 will be lost if Black plays with his king. For this reason, interposing the knight on h 6 is the right move.
In this lesson, we must also point out that two kings can never stand on adjoining squares, because they will then simultaneously give check and be in check. That is never permitted! It is preferable not to tell them that there always should be a square in between two kings. Children then think it is impossible to place any pieces between the kings.


The examples given in the diagram ( $\uparrow$ ) are obvious and self-explanatory.
The little game to go with this lesson is an exercise in which you keep the two kings apart.
After the next lesson, which covers mate, the students will be able to play their first real game. It will help them if a check during a game is called out aloud by the word "Check". Do not permit capture of the king. We would then be teaching them a rule which has to be unlearned at a later stage. Moreover, it is likely that children will try to give a 'silent check', thus taking advantage of the inattentiveness of the opponent.

## Summary

The attack on the opponent's king has a separate name: check. An attack on the king must always be neutralized. You may get out of check by:

- moving away with the king
- capturing (with the king or another piece)
- interposing a piece

Two kings must always remain one square apart. The adjoining square between the two kings need not necessarily be empty, a piece may occupy it.

## Practice

## Reminder

Check and getting out of check

## Playing format

King versus king
In the diagram ( $(₫)$ which king can capture
most counters (buttons, coins, checkers). The students have to bear in mind the square between the kings. The purpose of this little game is for them to learn that they should keep the kings apart. In the process, a student has to discover that keeping the opponent's king away is a successful strategy. With good play, White will of course prevail.

Kings and pawns going into battle The number of pawns may be restricted to three the first time (diagram $\Rightarrow$ ).
You may place the king behind any pawn of your choice. Whoever first gets a pawn to the other side or has captured all pawns first wins.
Variation:

- The number of pawns used at the start may vary. Eight against eight pawns is
 another option.
- The pawns are not connected (pawn islands).


## Workbook

Attacking / Giving check: A 8

Explanation: Before the students draw an arrow to show the good 'safe' chess move, they should first look at all options to deliver check. They should not lose any material.
Mistake: The checking piece can be captured.
Help: Look at the position from the opponent's side after playing the move. What piece can you capture?
Mistake: The move played costs material.
Help: Capture piece giving check yourself and compare the two captured pieces. Do you remember which piece is the more important one?
$\square$ Defending / Getting out of check: A
Defending / Getting out of check: B
Explanation: The students have to show the move that gets the king out of check. Indicating the check with a red arrow first offers a useful support promoting correct orientation. What options are there to get the king out of check? They choose the best one and draw an arrow.
Mistake: The king remains in check.
Help: Which piece delivers check? Try a different move. If the position then still is too complicated, then the position should be simplified (see introduction).

## ANSWERS

$\square$ Attacking / Giving check: A

1) 2. Bf4-d6+
1) 2. ... h5xg4+
1) 2. ... Nd7-c5+; 1. ... Rc8xc3+ gives up material.
1) 2. $\mathrm{Bg} 2 \mathrm{xc} 6+$
1) 2. ... b7-b5+
1) Drawing
2) 3. Rdl-d5+
1) 2. Bf1-b5+
1) 2. ... Qd6-b4+
1) 2. Ne5xc6+ or 1. Ne5-g6+ but that wins no pawn.
1) 2. ... Nb4-d3+
1) 2. Qa2-g2+

Defending / Getting out of check: A

1) $1 . \mathrm{Kgl}-\mathrm{hl}$
2) $1 . \mathrm{Khl}-\mathrm{gl}$
3) $1 . \ldots \mathrm{Kg} 8-\mathrm{h} 8$
4) $1 . \ldots \mathrm{Kg} 8-\mathrm{g} 7$, h 8
5) 6. ... Rc8xd8
1) 2. ... Qb6xf6; 1. ... Kf7-g8? 2. Qf6xb6
1) 2. ... Nd7xf6; 1. ... Kg8-g7 2.

Nf6xe8
8) 1. ... $a 6 x b 5$
9) $1 . \ldots \mathrm{Re} 7-\mathrm{b} 7$
10) 1. ... Qd7-g7
11) 1. $\mathrm{Ndl}-\mathrm{c} 3$
12) 1. Bfl-e2; 1. Qdl-e2;

1. $\mathrm{Ngl}-\mathrm{e} 2$
$\square$ Defending / Getting out of check: B
1) 2. ... Nb8xc6
1) 2. Nb 3 xc 5
1) $1 . \mathrm{Khl}-\mathrm{g} 2$
2) 3. ... Kc8-b8
1) 2. ... Kd5-c5
1) 2. Bg5-e3; 1. Kgl-hl? h6xg5
1) 2. ... Nd7-f6
1) 2. Kbl-al
1) drawing
2) 3. Nc4-d2
1) 2. ... Ra7xa3
1) 2. Bg5-d2; 1. Kdl-cl? Rd5xg5

## GOAL OF THE LESSON

- learning how to finish a game by mating the opponent
- the result of a game (winning or losing)


## PRIOR KNOWLEDGE

- check and getting out of check
- protecting a piece


## ACQUISITION

## Concepts

checkmate, mate, support, mating pattern, result, flight square, opponent, (chess) game

## Instruction

All knowledge from the previous lessons is necessary to tackle the concept of mate. Do not start the lesson if there still are clear gaps in this knowledge.
Delivering check and getting out of check and protecting a piece are particularly important. We recall this prior knowledge with simplified examples from the exercise sheets. Positions will be new for the students if we mirror them, change colours of the pieces or move the pieces one row up or down.
In the introduction, in the section of the chess development of a child, we suggested that this development should go from material to spatial. Space plays an important role in the present lesson. Mate implies control of the squares around the king. To mate a king away from the edge of the board means that the king must be denied a
total of squares. To allow a fluent development from material to spatial, we will start with mating positions in which the space is kept to a minimum. First in the corner and at the edge, and only then with material around the king (that is damaging to the defender). We introduce mate with a position as shown in the diagram ( $\uparrow$ ). Here moving away or interposing a piece is not possible, but capturing is an option. After the king is added, we deny Black this option as well. The king is in check and Black is not able to get out of it. We then say that the game has ended in 'checkmate' or simply 'mate'; alternatively we can say that Black has been '(check)mated'.
Check (shah) is the Persian name for king, mate means 'dead'. It is clear that Black is mated only because the queen is protected by the king. He supports his queen, hence 'supporting' mate. Mate means the end of the game. White wins and scores a point.
To explain a supporting mate, we can choose to add more pieces that support the white queen. We could e.g. protect the queen by a variety of pieces.
In the diagram ( $\Rightarrow$ ) the mating move is introduced. In the left part of the diagram White delivers mate by 1. Qb3-b6, on the right by 1. ... Qe1-g3. We shall limit ourselves to the mate with the queen. She denies the king all his squares (that is possible only along the edge of the board).
In the left diagram ( $\sqrt{ }$ ) the queen has to deliver check and also deny access to the escape square a4. A number of students will invariably answer with the move 1. Qb7-a6\#. They overlook that square b4 will become available for the king by this move. Correct is 1 . Qb7-b5\#.


The white king on the right cannot move anywhere. Still, Black has to choose the check with care. After 1. ... Rg8-g3+, White gets square h2 for his king; correct is therefore 1. ... Qf4-g3\#.
Possible questions: "To which squares can the king still escape?" "On which squares do the pieces cooperate?" "Where can you deliver a check?"
You can also deliver mate with a capturing move. For some students, this option will not be immediately obvious. In the left part of the diagram ( $\uparrow$ ) White is able to deliver mate by 1. Qc5xb5.
If the defending player has other pieces besides his king, then a defence may be possible. In the right part, 1. ... Qg6-g1+ is not good because White can capture the queen with his bishop. The correct mating move is 1 . ... Qg6-g2\#.
Tell the students to set up a few positions on their board themselves. Emphasize that the bishop, rook and queen may also protect pieces and squares from a distance. Point out backward moves and long moves. Careful observation will tell you how well the children have grasped the spatial aspect. It is clear that students who manually pick up the king when mate has been announced and try to move him over all the adjoining squares (and only then notice that the king cannot get out of check) are only beginning to understand the concept of space in chess (spatial comprehension).
On the left side in the diagram (ß) the black pawns are so poorly placed that the queen does not even need assistance: 1. Qc2-c8\#. This type of mate is called: a back rank mate.
On the right, the black queen needs help

from her own pawn: 1. ... Qf7-f4\#.
We see here that the number of escape squares available to a king can be restricted considerably by his own pieces. In case of a mating position, not all squares therefore need to be covered by the opponent's pieces. His own pieces may stand in the king's way.
Other pieces of the attacker can deliver a (supporting) mate too. There are four such examples in the diagram ( $\uparrow$ ). White mates in the top left corner by 1. Rb5-b8\#. Further clockwise: 1. Bf8-g7\# , 1. ... Ng4f2\# and 1. ... Rd2-a2\#.
Exercises where a piece has to be added are useful for learning how to deliver mate. We ask the children to add the missing piece on such a square that the position becomes a mate. In the left part of diagram ( $\Rightarrow$ ) we have to add a white queen. She should go to c8 to deliver mate. In the right part, a black queen has to deliver mate. If the queen stands on g 2 or h 1 , White is mated.
The instruction is sufficient if the student find the mate quickly. If they do not yet manage to do this perfectly, then it is useful to show them a few more examples on the demonstration board. Making them understand the mating concept can be accomplished by covering the subject from different angles. One way of doing this is by making exercises in which the supporting piece is added.
In this lesson it is not yet necessary to introduce the position in the diagram ( $\sqrt{ }$ ), but it serves as a good example for another kind of approach. In the left part of the diagram, the queen on c8 can still be captured by the king. Give a white pawn to a student and ask him to place that pawn on such a

square that Black is mated. A pawn on d7 is the correct solution; the queen is now protected.
Another approach is to add one or more pieces of the defender's own colour. The students now have to look for the escape square(s) still available to the king on the right. They should then add the piece on that square to block the escape. When the white pawn is placed on h 2 , White is mated.

## Summary

The king is in check. He cannot move anywhere and the check cannot be neutralized. He is mated.
One piece supports another piece so that the king cannot capture it. The king's own pieces sometimes get in the way, obstructing and preventing his escape. The game is finished when a king is mated and the winner will get a point. The loser will get a zero. The result is $1-0$ if White wins, $0-1$ if it is a victory for Black.

## Practice

## Reminder

Mate

## Playing format

Playing a game
At this point the students know the rules that are required to play a real game.

## Workbook

$\square$ Mate / Mate in one: $A$
Explanation: The students first have to check whether the king still has any escape squares. Covering those squares with green counters is a good prop (to draw a green + sign confuses the situation after the mating move has been made). Only then do they draw an arrow for the mating move. All mating patterns belong to the type we call 'supporting mate'.
Mistake: The piece that delivers check is unprotected.
Help: At which squares are both pieces looking? In a supporting mate, two pieces are covering the same square.
Mistake: $\quad$ The king is not mated.
Help: $\quad$ To which squares is the king still able to move?
Mistake: The range of the attacking piece in the old position is gone after the move is played. The queen covers square a6 from b 5 , played is the move Qb5-b8. Square a6 is now not any longer under the control of the queen.
Help: Set up the position, execute the move and let them conclude that it is not a mate. Then look at the position once more.
$\square$ Mate / Creating mate: $A$

## 8

Explanation: The king has to be mated. The piece next to the board needs to be added on a square from where it will check the king and at the same time targets all remaining escape squares.
Mistake: $\quad$ The king is not in check (and is therefore not mated).
Help: Such a mistake can occur by accident. Looking once more at the position will be sufficient in that case. It may also be an indication that the concept of mate is not yet clear enough. Let a good student help (useful for both parties).
Mistake: The king is not mated.
Help: Set up the position and execute the answer given. Let the students look for the defence. If that does not work, then choose a step by step approach:
"Can the king move away?"
"Can you capture the piece that delivers check?"
"Can you interpose a piece?"
$\square$ Mate / Mate in one: $A$

1) 2. Qf7-b7\#
1) Drawing
2) 3. ... Qc3-b4\#
1) Drawing
2) 3. ... Qd6xh2\#
1) Drawing
2) Drawing
3) 4. Qb2-b7\#
1) 2. $a 7 x b 8 Q \#$
1) 2. ... Qcl-g5\#
1) 2. ... Qb8-b2\#
1) 2. Qa4xd7\# \#

Mate / Creating mate: $A$

1) $\mathrm{Qb5}$
2) Qg 7
3) Rf8
4) Re 7
5) Qf4
6) $b 7$
7) Qh 1
8) b7
9) Dh 1
10) Qg 2
11) Bg 7


## Goal of the lesson

- see lesson 7
- learning elementary spatial control
- learning to control squares


## Prior knowledge

- mate


## ACQUISITION

## Concepts

complementary mate, cooperation, back rank, guarding, chasing

## Instruction

This second lesson about mate should be given only after the students have played games for a few weeks!
Only a limited number of mating patterns have been introduced thus far: the supporting mate and the mate in which the defender's material is preventing the king to escape. The spatial aspect remains limited in the supporting mate because the piece delivering mate is standing on the square next to the king.
In the type of mate we will deal with in this lesson, pieces are cooperating in another way: they complement each other. Spatial control therefore plays a bigger role in this 'complementary' mate. It is advisable that we make the transfer from material to spatial as concrete as possible. We will therefore use accessories (e.g. magnets) on the demonstration board. These should indicate
to which squares the king can and cannot escape. Further, it is important that the previous material has been absorbed sufficiently.
We avail ourselves in the complementary mate of two concepts: guarding and chasing. Guarding implies that squares to which the king might escape, are controlled. By chasing, we mean delivering check so that the opponent's king has to move away.
Guarding is explained by means of the diagram ( $\Rightarrow$ ). With assistance of green and red magnets (or + and - signs), we mark the squares to where the king may and may not move. The king is not allowed to go to squares d7, e7 and f7. The squares d8 and f8 are accessible, though. The rook guards the king who cannot escape from the back rank. Other squares on the $7^{\text {th }}$ rank are not important for the mate.
The queen is an even better guard because she can deny the king more squares. In the lower part of the diagram the king can move only to gl. Indicate the guarded and unguarded squares by marking them.
In the diagram ( $\sqrt{ }$ ) the students will indicate the rook on b 7 as the guard and g 8 as the only square where the king may still move. The task of the white pieces is to deliver mate together. The rook on a6 does not do anything at this moment. His job is to deliver check to the king. There are two checking moves. 1. Ra6-h6+ does not make sense as the king can move to g8. The job of the chaser is to check and to deny the king the last escape square. The more 1. Ra6-a8\# suits two purposes. Note that the rooks complement each other.
In the lower part of the diagram, a similar

example is given, but with a small difference. After 1. ... Rf5-h5\#, White has been of course checkmated, although there will be some children who will try to escape to h1. After all, the Black pieces do not have direct contact with this square.
There are two examples in the diagram ( $\widehat{\text { © }}$ ), which may be treated in a similar manner. In the left part, White delivers mate by 1. Ba4-c6\#. In the position on the right, the chaser must simultaneously deliver check and deny square g2 to the king. The right answer is therefore 1. ... Qh5-f3\# or 1. ... Qh5-d5\#. After 1. ... Qh5-dl+, the king would escape to g 2 .
We tell them to indicate in the diagram ( $\Rightarrow$ ) both the inaccessible and the accessible squares of the king. The king can only move to a7. The bishop covers square b8, the queen the squares $b 7$ and b8. The knight on $d 7$ prevents mate on b8. The queen must deny square a7 and deliver check to achieve mate, but in doing so she cannot lose sight of square b7. By 1. Qb5-a6\#, White delivers check and controls all the king's escape squares.
Repeat these kinds of exercises in a step-by-step-fashion so that it is clear that the students have understood the material. Step by step means that we are paying attention to the escape squares and to the place of the king as well as to the guard and the chaser. In this lesson, it is possible to use the prop of adding pieces to a position. The piece delivering mate is often left out initially.
The last three positions show extra possibilities, and indicate potential problems that may occur in complementary mates.
In the diagram ( $(\checkmark)$, there are two guards on the $7^{\text {th }}$ rank. Still, there is only one way in

which White can deliver mate. Only 1. Rg7-g8\# is mate because after 1. Rb7-b8+, Black can capture the rook. In the lower part of the diagram, Black plays 1. ... Rh2h1\# . White may interpose the bishop on dl after check by the other rook.
Tell the students to always check the move that they want to play. In chess, the opponent continues to play until the very end of the game.
In the diagram ( $\uparrow$ ), there is a rook on the square to where the king can escape. Escape is accomplished by a capturing move. The knight move 1. Nd7-f8+ therefore does not lead to mate. In this case, the chaser must perform various functions simultaneously. By 1. Nd7-f6\#, the knight provides two services. It delivers check and it protects the rook on g 8 ; a combination of supporting and complementary mate.
By first checking where the king can still move to, students may reach a hasty and incorrect decision. This is illustrated in the diagram ( $\Rightarrow$ ). From the fact that the king cannot move anywhere, the children may sometimes conclude that a simple check is sufficient for a mate. Wrong. The chaser may open up already guarded squares to the king. White should not check with the knight on f 7 . This produces the wrong cooperation between the attacking pieces: the king is suddenly offered three squares where it can escape to. The knight sabotages the control of the rook and the bishop over the squares $\mathrm{g} 8, \mathrm{~g} 7$ and h 7 . Correct is 1. Ne5-g6 mate. The only function of the knight is to deliver check, but that is sufficient. The guards continue to do their work undisturbed.


## Summary

Pieces must cooperate when delivering mate. Preventing the king from escaping is just as important as delivering check. There are pieces which must guard and there is a piece that chases: the guards and the chaser do their work together and mate the king. The chaser must take care that he does not get in the way of the guards. Sometimes he has to perform the double task of delivering check and controlling escape squares.

## Practice

## Reminder

$\diamond$ Mate

## Playing format

Chasing and guarding
Starting from the diagram ( $\Rightarrow$ ) the queen and the rook must mate the opponent. It makes sense to first play this little game with the whole group on the demonstration board. Queen and rook will constantly change the roles of guard and chaser.
In small groups, it is possible to finish the assignment by simultaneous display. If the students play each other, then the defender can be motivated to continue for as long as
 possible. Keeping a tally of the number of moves is not difficult.
Variation: Mating with two rooks. A bit more difficult.

## Workbook

$\square$ Mate / Creating mate: $B$
Explanation: The students must add the piece that is next to the board in
such a way that the position becomes a checkmate. Instead of drawing the piece, writing down the first letter or a simple mark is sufficient. This mating pattern is an example of complementary mate.
Mistake: The king can still play.
Help: $\quad$ Most of the time, the piece that checks must also control escape squares. To which squares can the king still go? Indicate these squares with a plus sign.
Mistake: The king can play again.
Help: The added piece stands in the way of the guards. Set up the new position and look at where the king can move to. Was this also possible in the original position?
Mistake: A piece can be interposed.
Help: In case of mate, a child is inclined to look king moves only. What ways do you know to get out of check? Let them check the other possibilities (capturing, interposing).
$\square$ Mate / Mate in one: $B \quad$ \&
Explanation: All mating patterns are an example of complementary mates. Tell the students to indicate with + and - signs the options of the king first (with a green and red pencil would be the clearest). Only then they are allowed to draw an arrow for the mating move. Warn them for the dangers. The chaser must sometimes also control flight squares and he is not allowed to get into the way of his own pieces.
Mistake: The piece delivering mate can be captured.
Help: In what ways can you get out of check? Check the possibilities one by one and look at the various possibilities on the board.
Mistake: The king has obtained new escape squares as a result of the check. Sometimes the chosen move means that the chaser only gives check and does not simultaneously control a flight square.
Help: Look at the new situation. Where can the king still move to? Was that also possible in the original position?
$\square$ Mate / Mate in one: C
Explanation: In all mating patterns, own pieces are in the king's way. Only the last two positions will occasionally cause problems. Before looking for the solution, it may be useful to first
prepare by marking the position with + and - signs.
Mistake: The king can still move.
Help: The piece that checks also has to control a few escape squares. Where can the king still move to?
$\square$ Mate / Creating mate: $C$
88
Explanation: The students must add the piece that is next to the board in such a way that the position becomes a checkmate. The first letter of the piece is sufficient. The mating pattern can be supporting and/or complementary. See also the previous sheet (where they have to create a mate).
$\square$ Mate / Creating mate: $D$
888
Explanation: The king is already in check. The piece that must be drawn on the board is assigned guard duty and should cover the king's escape squares. Tell the students to first indicate where the king can still move to. The solution will then no longer be a problem.
Mistake: The king can still move.
Help: The added piece must control more than one square. Set up the position and check the king's options. See also the previous sheet (where they have to create a mate).

The number of exercise sheets with 'mate' is large. They do not all belong to this lesson. The exercise sheets D through I may be used as extra exercise material after one of the following lessons. A lot of instruction is therefore not necessary.
The children have thus far exercised the mating positions on 'empty' boards with only the pieces that are involved with the mate present. They will now get the opportunity to try and recognize the same mate on the exercise sheets above-mentioned, in positions where there are more pieces on the board. We will thus get a good idea what the students are capable of.
$\square$ Mate / Mate in one: $D$
88
$\square$ Mate / Mate in one: $E$
88
Explanation: The positions are a bit more 'crowded' on these exercise sheets. In each vase, the topic is that of complementary mate. We repeat a number of mating patterns that already occurred on an exercise sheet in more difficult positions.

Explanation: Subject on exercise sheet $F$ is always the complementary mate. This work sheet may be used independently in order to let the children exercise mate in more 'crowded' positions.Mate / Mate in one: $G$
㖃
$\square$ Mate / Mate in one: $H$ \& 8
Explanation: Sheets G and H may be used during this course as a broadening exercise for everyone. It gives quicker students the opportunity to expand their skills by means of more, and gradually more difficult exercises.
On the G sheets, the children should be constantly on the look-out for options available to the defender. A few extra difficulties in other positions, e.g. using longer moves when delivering mate. The reason for this is that children, and especially younger ones, have difficulty in finding moves in which pieces move over longer distances. In addition, the positions have been constructed in such a way that the mate is relatively hidden; the student will have to look at a number of possible solutions. There are seductions in these positions, and only one move will lead to mate in one.
Mistake: $\quad$ The student does not find the mate.
Help: In the previous lessons we have already given a lot of advice on how to help. The best strategy is to simplify the positions by removing irrelevant pieces.

## ANSWERS

$\square$ Mate / Creating mate: B

1) Rh 1
2) Bc3...h8
3) $\mathrm{Qa} 8, \mathrm{Qb} 7$
4) Re 3
5) $\mathrm{Ba} 2, \mathrm{Bb} 3, \mathrm{Bc} 4$
6) Qc 8
7) $\mathrm{Nh} 6, \mathrm{Ne} 7$
8) Qf8
9) Ra8...e8, Rh8 (last move
10) Bh 7
must be l.g7xh8R\#)
11) $\mathrm{Bf} 2, \mathrm{Be} 1$
12) Nf2

Mate / Mate in one: B

1) 2. Qc8-a8\#
1) 2. ... Rc6-h6\#
1) 2. Bb3-d5\#
1) 2. Qcl-c8\#
1) $1 . \ldots$ e2-elQ (R)\#
2) 3. ... Rb6-bl\#

Mate / Mate in one: C

1) 2. Qa4-e8\#
1) $1 . .$. Qh7-h2\#
2) 3. Qc2-a4\#
1) 2. ... Ng4-f2\#
1) 2. ... b3-b2\#
1) 2. ... Rb2-bl\#

Mate / Creating mate: $C$

1) Qd 7
2) Qh 5
3) $\mathrm{Re} 8, \mathrm{Rd} 8$
4) Qe 8
5) Nf 7
6) Rc 7
7) c 5
8) Ng 4
9) Ba 6
10) Nb 3
11) Rh 5
$\square$ Mate / Creating mate: $D$
12) $\mathrm{Kc} 6, \mathrm{Kc} 4$
13) Bc 4
14) g 3
15) $\mathrm{Rf} 8, \mathrm{Rg} 8, \mathrm{Rh} 8$
16) Qe6, Qf7
17) Bh 4
18) Ne 2
19) f5
20) Qe3
21) Bd4
22) Nb 3
23) $g 4$

Mate / Mate in one: $D$

1) $1 . \mathrm{Ng} 5-\mathrm{f} 7 \#$
2) Drawing
3) 4. $\mathrm{Ng} 4-\mathrm{h} 6 \#$
1) 2. ... Rc2xh2\#
1) 2. ... h3-h2\#
1) $1 . \mathrm{Bb} 2 \mathrm{xf6} \#$
2) $1 . \mathrm{Ne} 5-\mathrm{g} 6 \#$
3) 4. ... Nb4-c2\#
1) $1 . \ldots \mathrm{d} 2-\mathrm{d} 1 \mathrm{Q} / \mathrm{B} \#$
2) 3. Ra5-h5\#; 1. Rg3-h3+?
1) 2. ... Qf6-al\#
$\square$ Mate / Mate in one: $E$
1) $1 . \mathrm{Re} 6-\mathrm{e} 8 \#$ 7) $1 . \mathrm{d} 7-\mathrm{d} 8 \mathrm{Q}(\mathrm{R}) \#$
2) 3. ... Bb7-f3\#
1) 2. ... Qg3-a3\#
1) 2. ... Bh7-e4\#
1) 2. ... $\mathrm{Bg} 7 \mathrm{xc} 3 \#$
1) $1 . \ldots$ Qfl-hl\#
2) 1.... Ra8-e8\#
3) 4. ... Qc8-cl\#
1) 2. Ne5-f7\#
1) $1 . \operatorname{Rg} 6-a 6 \#$
2) 3. $\mathrm{Bbl}-\mathrm{e} 4 \#$
$\square$ Mate / Mate in one: $F$
1) $1 . \mathrm{Qd} 5-\mathrm{g} 8 \#$
2) 3. ... Rd2xh2\#
1) Drawing
2) 3. ... Rf8-fl\#
1) 2. ... b2-blQ\#
1) 2. Qd8-b6\#
1) 2. ... Qc5-gl\#
1) 2. ... Rb2xh2\#
1) 2. ... Qg7-g2\#
1) 2. Qf3xb7\#
1) 2. ... Qa4xc2\#
1) 2. $\mathrm{g} 6-\mathrm{g} 7 \#$
$\square$ Mate / Mate in one: $G$
1) 2. Rel-e8\#
1) $1 . \mathrm{Ne} 5-\mathrm{f} 7 \#$
2) $1 . \mathrm{g} 6-\mathrm{g} 7 \#$
3) Drawing
4) 5. ... Qf2-h4\#
1) 2. ... Bg6-e4\#
1) 2. ... Qa5-el\#
1) 2. b6-b7\#
1) 2. Nc5-a6\#
1) 2. ... Ra5-g5\#
1) 2. a6-a7\#
1) 2. ... Ne5-f7\#
$\square$ Mate / Mate in one: H
1) 2. ... Qb8-h2\#
1) 2. Bc4-f7\#
1) 2. $\mathrm{Nb} 5-\mathrm{c} 7 \#$
1) 2. Rdl-hl\#
1) 2. Qf3-f7\#
1) 2. b7-b8Q/R\#
1) 2. ... Nf5-g3\#
1) 2. Bcl-h6\#
1) 2. Qdl-h5\#
1) 2. ... f2-f1N\#
1) 2. ... Ra2-e2\#
1) 2. Rdlxd8\#


## GOAL OF THE LESSON

- learning the importance of the safety of the king
- bringing the rook into play


## Prior KNOWLEDGE

- check
- attack on squares


## ACQUISITION

## Concepts

castling, castling kingside, castling queenside, development, bringing into play, king's wing, queen's wing

## Instruction

For this lesson, we take the games that the children have played thus far as our point of departure. We choose a game in which one of them was mated quickly. The king remains in danger as long as he is standing in the middle of the board. To let the game last longer, castling was introduced in the $16^{\text {th }}$ century, as a move to promote the safety of the king. It is the only move in which you play two pieces at the same time.
In the diagram ( $\sqrt{ }$ ) the white king and the rook are in their initial position. Now perform the castling move in the following manner.

- Only grab the king and move him two squares to the right in the direction of the rook.
- Release the king (he is then on gl).
- Grab the rook with the same hand and

move it to the other side of the king, to fl. The position that occurs after castling is given in the diagram ( $\uparrow$ ).
Other ways of castling (e.g. either using two hands or moving with the rook first) are not permitted. It is at any rate very logical to grab the king first. The move Kel-gl would be illegal and therefore it is quite obvious that White intends to castle. On the other hand, the move Rhl-fl would be a legal move (and so does not necessarily have to be interpreted as the first stage of castling).
Now put the king back to el and move the rook to al. From this point, we will now castle on the queenside.
- Only grab the king and move him two squares aside in the direction of the rook on al.
- Release the king (he then stands on cl).
- Grab the rook with the same hand and move it to the other side of the king, to dl.

The position that occurs after castling is given in the diagram ( $\Leftrightarrow$ ).
After performing both castling moves, one of the students will undoubtedly discover that the location of the king in relation to the corner is different. This difference is important. We use it to introduce the terms kingside and queenside castling. There is only one square left in the corner after kingside castling. The students should perform both ways of castling on their own board, also for Black.
Castling on an empty board will give them a wrong impression. The king needs to be brought to safety. In the diagram (®) we have added pawns on $\mathrm{f} 2, \mathrm{~g} 2$ and h 2 and also set up the black castling position.


After castling, the white king will be completely safe behind his pawns and the black king will be almost safe (e.g. checking the white king is not possible, while the black king can be checked along the h3-c8 diagonal).
Both ways of castling can be easily performed by a child on the demonstration board. We tell them that castling is not only useful for bringing the king to safety, but also because it brings the rook into play.
The second phase of this lesson consists of telling the children when castling is not permitted.
The rules which state the conditions under which it is illegal to castle, can be best remembered by dividing them into two groups.
The first group (without check):

- If you have played with the king; even if he is standing on e8 again. (diagram $\uparrow$ - Black).
- If you have played with the rook; even if it is back on al or hl . (diagram $\uparrow-$ White).
- If there is a piece between the king and the rook (diagram $\Rightarrow$ - Black).
The positions are self-explanatory. The students will not have any problem with them.
The second group (with check as common feature):
- If you are in check (diagram $\Rightarrow$ - White)
- If you will end up on a square controlled by an enemy piece (so that the king will be in check) (diagram $₫$ - Black)
- If you move with the king across a square that is controlled by an enemy piece (diagram $\Omega$ - White kingside castling)


Special attention should be given to the attack on the al rook in this diagram. White is permitted to castle queenside in this position. The king will not pass over a square that is attacked.
These rules must be clarified with more emphasis and through examples. In practical games, the students will overlook the last two examples in particular.
It is no luxury to let the students repeat these rules during the lesson. They will remember these rules better. The essence, however, is not being able to reproduce the rules (e.g. "You cannot castle if that puts you in check") but in applying the rules (e.g. "Is White allowed to castle in this position?").
After having been introduced to this new information, working with the reminder will do the rest. Subdividing the material into two sets of rules makes the memorising process easier. Few people will retain more than 4 items of new information at the same time.
A separate note about castling is introduced in the lesson about notation (lesson 15).

## Summary

The king and a rook move simultaneously during castling. It brings the king to safety. At the same time, the rook comes into play. There are 6 separate kinds of situations in which you are not permitted to castle.

## Practice

Reminder
$\diamond$ Castling

## Workbook

$\square$ Rules of the game / Castling: $A$
Explanation: A multiple choice exercise. The students should blacken or mark the correct circle. In positions where castling is not permitted, they should indicate why castling is prohibited.
Mistake: Exceptions are not acknowledged.
Help: Concrete questions help. "Is the king in check?" "Which piece looks at fl?" Did you see the bishop on a3?" "Where will the king end up after castling?"

## ANSWERS

$\square$ Rules of the game / Castling: A

1) no (the king has moved)
2) no (there is a bishop between king and rook)
3) no (White is in check)
4) no (Black would be in check after castling)
5) yes
6) no (the king would have to pass dl, where it is in check)
7) yes
8) no (White would be in check after castling)
9) no (the king has to pass d8, where it is in check)
10) yes
11) yes
12) no (White is in check)


GOAL OF THE LESSON

- learning value of the pieces
- learning exact ranking order of the pieces


## PRIOR KNOWLEDGE

- mobility of the pieces
- special characteristics of pieces


## ACQUISITION

## Concepts

value, trading pieces (of the same value), profitable exchange, exchange

## Instruction

When we explained the way the pieces move, we already indicated a provisional order of rank related to the value of the pieces. As the students have started to play games, it makes sense to determine this value more exactly. They can use this information to their advantage when capturing protected pieces.
We now go back to the lesson where we discussed the way the pieces go. Tell the children to put a knight on d5 on their own board (diagram $\Rightarrow$ ). Let them count the number of possibilities the knight has. Count the number of squares it can move to. We come to a total of 8 , which we write on the blackboard or on the flip-over.
We repeat this with a bishop on d5 (diagram $\sqrt{ }$ ). This piece can move to a total of 13 squares.
We also count the number of possible

moves from d 5 for the rook and the queen. The rook comes to 14 moves and the queen comes to an impressive 27. Smart children will not count the moves of the queen but add the numbers of rook and bishop). The king may move to 8 squares from d5, the pawn has only one move.
The conclusion is that some pieces cover more squares than others and therefore have more options than others. Using this information, we can make a list of values, in which the piece with the most options gets the highest value. The queen is about twice as capable and mobile as the rook. We therefore give the queen 9 points and the rook 5. A problem occurs when assigning a value to the bishop. It can do almost as much as the rook, and much more than the knight. But because the bishop can only use 32 squares, it is worth less. Furthermore from the edge of the board, it can look at far fewer squares (on bl it looks at just 7). It therefore gets a mere 3 points behind its name.
The knight also is allocated 3 points, just as many as the bishop. The knight has the important benefit that it is capable of jumping over other pieces. And it can go to all 64 squares. The pawn is worth 1 point. The following table summarizes the preceding discussion.

|  | from d5 | value |
| :--- | :---: | :---: |
| knight | 8 | 3 |
| bishop | 13 | 3 |
| rook | 14 | 5 |
| queen | 27 | 9 |
| pawn | 1 | 1 |
| king | 8 | - |

The value of the pieces should be used when calculating a capturing move. It is
then also clear why the king has not been given a value. He cannot be captured, he remains on the board until the very end of the game.
We will now discuss the trading of pieces (of the same value) and the profitable exchange using the demonstration board.
Trading (capturing) pieces of the same value does not appear to be a problem. However, in many games of children the sentimental value of a piece plays a part. They (and adults too) sometimes experience great difficulty in trading a strong piece like the queen or a beloved piece like the knight. "I am not going to capture, because then I shall lose my queen," is their argument. They are convinced that their own piece is stronger than the same piece of the opponent! It helps if we now emphasize that capturing a piece of the same value involves trading, which we demonstrate by letting both queens to be captured.
Trading means that the piece being captured is protected and that the piece capturing it is being recaptured.
In the diagram ( $\Rightarrow$ ), we give examples of the trading of queens and rooks. The queens have been exchanged after 1. Qa5xd8 Rc8xd8. The same applies to the rooks on the right: 1. Rh2xh7 Kh8xh7.
In the left part of the diagram ( $\sqrt{ }$ ), we deal with the trading of bishops after 1. Ba4xc6 b7xc6.
On the right White may choose between trading of the knights or of a bishop against a knight. The value of the pieces that are being traded is the same every time.
When we explain the concept of a profitable exchange, we start with the largest

possible difference in value.
In the first example in the diagram ( $\uparrow$ ), we let a pawn capture the queen. After 1. c5xb6 c7xb6 White has earned no less than eight points, the difference between a queen and a pawn $(9-1=8)$. A second example is given on the right. The black rook can capture the white queen. That earns Black 4 points $(9-5=4)$.
It is easy to think up a few more examples yourself. Make sure that the captured piece is itself protected, because this will determine the exchange. Capturing an unprotected piece is something else altogether.
The most common profitable exchange is seen in the diagram ( $\Rightarrow$ ). A knight or a bishop captures a rook. This capturing move occurs so often that there is a special name for the difference in value between bishop or knight and the rook. We call this the 'exchange', a gain of 2 points.
On the left, White wins the exchange by capturing on c3: 1. Na2xc3 Rc8xc3.
On the right, Black is the lucky one after 1.
... Be7xh4 2. g3xh4.
Finally we discuss the two positions in the diagram ( $\sqrt{ }$ ). In both cases you can choose between two captures. These kinds of positions also occur in the exercise sheets. It is important not to be satisfied with the first profitable exchange that meets the eye.
On the left, White of course captures the queen. She is worth more than the rook.
On the right, the pawn captures the rook.
This earns two more points than capturing the bishop.


## Summary

When playing games, it is useful to know roughly how much pieces are worth. Pieces
that possess more qualities (larger range, greater mobility) than other pieces are worth more. The queen is therefore worth more than all the other pieces: 9 points. The rook ( 5 points), bishop and knight (each 3 points) are less important but they are still more important than the pawn (1 point). The king is not given any value. Trading is capturing and recapturing of pieces of roughly the same value. If we gain points when trading, we call this a profitable exchange.

## Practice

## Reminder

$\diamond$ Exchange and profitable exchange

## Workbook

## $\square$ Material / Profitable exchange: $A$ <br> $B$

Explanation: First of all, the students should compare all possible capturing moves. Only then should they choose the move that gains them the most material. It is useful to let them record the recapturing move with an arrow too. The points gained can be recorded at the bottom of the diagram. The list of values in the reminder (or on the blackboard) can be used for this.
Mistake: The student is content with trading pieces of the same value or with fewer material gain than was possible in the position.
Help: $\quad$ Consulting the list of values is sufficient.
Mistake: The solution is not found.
Help: The distance between the pieces is too large. Putting the pieces closer to each other helps.
Help: The board is too full. Simplifying the position by removing several irrelevant pieces. If there are a lot of pieces cluttered around the piece to be captured, most children will be confused.
$\square$ Test / Repetition: B $B$
Explanation: The positions on this exercise sheet have probably been made before. The result will give the teacher a good idea of where the children are on the learning curve.
Mistake: Many mistakes.
Help: Do not proceed with new material but let them play a lot of games first, and only then offer this sheet once more. If the mistakes continue to relate to the same themes, then a fresh explanation is obviously called for.
$\square$ Test/Mix: $B$
Explanation: The themes of the exercises are indicated.
Mistake: The solution is wrong.
Help: See the relevant chapter.

## ANSWERS

$\square$ Material / Profitable exchange: $A$

1) 2. e5xf6 g7xf6 (2 points)
1) 2. e5xd6 c7xd6 (4 points)
1) 2. ... Nc5xd3 c2xd3 (2 points)
1) 2. Bg 2 xa 8 Rf 8 xa 8 (2 points)
1) 2. Rdlxd7 Nf6xd7 (4 points)
1) 2. Nc3xd5 e6xd5 (2 points)
1) 2. ... $\mathrm{Bg} 5 \mathrm{xcl} 2 . \mathrm{Rflxcl}$ (2 points)
1) 2. ... Ra2xf2+ 2. Kg2xf2
$\square$ Material / Profitable exchange: $B$
1) 2. d5xc6 b7xc6 (2 points)
1) 2. f5xe6 f7xe6 (2 points)
1) 2. f4xe5 d6xe5 (4 points)
1) 2. Ne7xc8 Qc4xc8 (2 points)
1) 2. ... Nc $4 \mathrm{xd} 2+2$. Nf3xd2 (6 points)
1) 2. ... Bh6xcl 2. Rflxcl
(4 points)
1) $1 . \ldots \mathrm{d} 4 \mathrm{xc} 32$. b2xc3
(2 points)
2) 3. Nd4xe6 $77 x e 6$ ( 6 points)
1) 2. ... Bd6xf4 2. g3xf4
(6 points)
1) 2. ... d4xc3 2. b2xc3
(2 points)
(2 points)
1) 2. ... Rd3xb3 2. a2xb3
(4 points)
1) 2. Be3xa7 Nc6xa7 (2 points)
$\square$ Test / Repetition: B
1) 2. ... Nd4-c2\#
1) 2. ... $a 6 x b 5$
1) 2. Qa4xd7\#
1) 2. Ra5-h5\#
1) $1 . \mathrm{Ndl}-\mathrm{c} 3$
2) 3. Rc7\#
1) no (in check after castling)
2) 3. ... h3-h2\#
1) $1 . \mathrm{Rd} 1 \mathrm{xd} 7$
2) 3. ... Rd8-d2+
1) 2. ... Nb4-d3+
1) 2. Nd4xe6

Test / Mix: B

1) $1 . \mathrm{Ng} 4-\mathrm{h} 6 \#$ 7) 1. Qe5-h5\#
2) 3. ... Bc6xg2 2. Rg1xg2 (2 points)
1) 2. $\mathrm{Bb} 2-\mathrm{d} 4$
1) 2. Bh7-f5\#
1) yes
2) 3. ... Rb2xb7 (4 points)
1) 2. ... Nd6-c4
1) 2. Nc5-b7\#
1) 2. Bc6xg2
1) 2. Relxe5
1) 2. Qd4xb6


## GOAL OF THE LESSON

- learning to control the cooperation of pieces
- leaming to attack effectively


## PRIOR KNOWLEDGE

- attack and defence
- value of pieces


## ACQUISITION

## Concepts

twofold

## Instruction

The students must be able to handle some of the concepts that re-appear without effort, otherwise this lesson will be too ambitious. The concepts are attack, defence by protecting, exchange and (un)profitable exchange.
We start with the diagram ( $\Rightarrow$ ). A wellknown position for the students. Pawn h7 is attacked twice and defended only once. White can deliver mate by 1. Ra7xh7\#. The bishop protects the rook. Without the bishop, Black would be able to capture on h7.
In the diagram ( $₫$ ), Black can deliver mate by 1. ... Qe2xb2\#. This is possible because of the cooperation between queen and knight.
In both positions there are more attackers than defenders. The majority of attacking pieces can be used to gain material. This looks simple, but the difficulty lies in the

number of moves that are involved. We will therefore begin quite simply. First, only the white knight and the black bishop are present to repeat the concept of attack (diagram $介$ left). If it is White's turn to move, then he can capture the black bishop. Then the concept of defence is introduced. An example is provided in the right part of the diagram, where the rook protects the bishop. Black can recapture after the knight takes the bishop. White has not gained anything because the bishop was protected. We now complete the position by adding the white rook (diagram $\Rightarrow$ ). White captures the bishop with the rook, Black recaptures and White captures once more. It does not matter whether White captures with the rook or with the knight first (in the latter case Black does not recapture). The result is that White has gained a bishop. If two pieces attack an opponent's piece that is only protected once, we are dealing with a twofold attack. It is important that the students realize that the following elements play a role in a twofold attack:

- the attack (Rg1 and Nf3)
- the defence (Rg8)

A piece that is attacked twice and protected only once is in danger, since it is insufficiently defended. By telling the students to play the moves on their own board, the action will become more concrete for them. In the diagram ( $\sqrt{ }$ ), we find twofold attacks with other pieces. It sometimes does not matter with which piece we capture first. On the left White is able to capture with the queen and with the bishop. In both cases, he will win a knight.
On the right the bishop on g 5 is attacked twice and protected only once: White can

capture with the bishop or the knight and gains a bishop.
Discuss these examples (and - if necessary - other ones, depending on the level of the group). After every solution we ask what material has been gained.
In the diagram ( $\uparrow$ ), we see a twofold attack. Let the children count how many times a piece is attacked and defended first. Let them point this out as well. Only then do we ask them to play the correct move. White cannot just capture on c4. If you capture with the queen first, it will cost a point. We have to capture with the least valuable piece. By capturing with the rook first, we will gain three points. Make all the moves and show what has been earned.
On the right, only a capture by the bishop on g6 will gain a point.
Not all twofold attacks will gain something. In the left side of the diagram ( $\Rightarrow$ ), White would be ill-advised to capture on c6 twice, as this would lose a point.
White should not capture either on the right on 18 (will cost a point). A modest retreat towards h 3 is the right approach.
It is advisable to discuss the more difficult forms of the twofold attack depending on the speed and the progress of the lesson and the level of the group.
More difficult twofold attacks are given in the diagram ( $₫$ ). White has to give material first in order to gain material.
On the left side the knight on c6 is attacked twice. However, the students will hesitate about capturing; after all, the rook is more valuable than the knight. The gain of one point becomes apparent only after the action has been completed. On the right Black will gain material only by capturing

with the rook.
Pieces that function in the same manner on the same rank or file also attack twice. The function of the piece at the back is hard to see for younger children in particular; the problem here is that the piece in front 'masks' the function of the piece in the back.
In the left side of the diagram ( $\uparrow$ ), the rook on a8 will be lost: 1. Ra4xa8.
A similar twofold attack can be executed along the diagonals. On the right Black wins a knight by 1. ... Bg6xe4. By telling them to execute the moves on their on boards, this attack will become more meaningful for the children. The part of the twofold attack over one line may be saved - if necessary - for a later time. This form does not appear on exercise sheet A .

## Summary

An attack on a protected piece with the same value does not lead to a material gain. We can speak of insufficient defence only, if an extra attacker is recruited. This kind of attack is called the twofold attack.
In some positions, the attacker can choose with what piece he will capture first; sometimes only one order of capturing is correct, while in rare cases, we have to give material first. The twofold attack can also be used to deliver mate.


## Practice

Reminder<br>Twofold attack

## Workbook

$\square$ Material / Capturing a piece that is attacked twice: $A B$
$\square$ Material / Capturing a piece that is attacked twice: B B B
Explanation: Indicating the correct moves with arrows is bit more difficult, because two lines of attack and one of defence are asked for. The move played will become apparent by giving brackets to the piece that captures first or by numbering the arrows. In some positions, indicating one move is sufficient (in case of a mate, or if recapturing is illegal or costs material).
Tell the students to indicate how many points were gained underneath the diagram. The list of values on the reminder of the previous lesson can be useful.
Mistake: The assignment is not successful.
Help: Reducing the position to the essential pieces is an effective method. Tell the students to verbalize the problem. For many, the use of the board and pieces is a necessary support to find the correct way of counting the gained points. The solution is one and a half move away, which is beyond the horizon of many children.
Mistake: The sequence of capturing is a problem.
Help: We let them execute both ways and count the gain. Maximum material gain is required. Check whether the students can handle the correct value of the pieces.

## ANSWERS

Material / Capturing a piece that is attacked twice: $A$

1) 2. Rc7xe7 (or 1. Relxe7)
(1 point)

Te8xe7 2. Telxe7 (3 points)
2) 1. ... Re8xe5 or 1. ... Nd7xe5
(3 points)
3) 1. ... Bf6xe5 2. Lb2xe5

Te8xe5 (3 points)
4) 1. Nf3xe5 (or 1. Bc3xe5) 2.

Pc6xe5 2. Bc3xe5 (3 points)
5) 1. ... Ne4xg3 or 1. ... Bd6xg3
6) 1. Ne5xf7 or 1. Bb3xf7 (1 point)
7) 1. ... Re8xe7 (5 points)
8) 1. Relxe5 (5 points)
9) 1. Nd3xe5 or 1. f4xe5 (1 point)
10) 1. ... e5xd4 or 1. ... c5xd4 (1 points)
11) 1. Bb5xc6+ b7xc6 2. Tclxc6 (1 point)
12) 1. $\mathrm{Bg} 2 \mathrm{xd} 5 \mathrm{Lb} 7 \mathrm{xd} 52 . \mathrm{Kd} 4 \mathrm{xd} 5$
$\square$ Material / Capturing a piece that is attacked twice: B

1) 2. Rd8xf8+ or 1. Rflxf8+ (5 points)
1) 2. Bb2xf6 Be7xf6 2. Rflxf6 (3 points)
1) 2. ... Rd7xd3 2. Rdlxd3 Rd8xd3 (5 points)
1) 2. $\operatorname{Bg} 5 \mathrm{xf} 6 \mathrm{Bg} 7 \mathrm{xf6} 2$ 2. Rflxf6 (3 points)
1) Drawing
2) Drawing
3) 4. Qd2xd7 Qd8xd7 2.

Bb5xd7 or 1. Bb5xd7 (3 points)
8) 1. Rc2xc6 Bb7xc6 2. Rclxc6 (1 point)
9) 1. Ng 5 xf 7 ! (3 points) or 1 . Bc4xf7+ (1 point)
10) 1. Qd3xh7\#
11) 1. Bc4xf7+ (1 point)
12) 1. Bd3xa6 Bb7xa6 2. Qe2xa6 (1 point)


## GOAL OF THE LESSON

- learning a different way to finish a game
- equal result


## PRIOR KNOWLEDGE

- all rules concerning the king
- spatial control


## ACQUISITION

## Concepts

equal play, draw, stalemate

## Instruction

Just as in other sports, finishing a game undecided is possible in chess. An undecided game has a separate name in chess (and also in checkers): draw. Both players get half a point; the result is then $1 / 2-1 / 2$. For the time being, two ways to make a draw are important for the beginning chess player. The first one can be explained quickly. In a position with only kings (diagram $\Rightarrow$ ), none of the players can deliver mate anymore. A game is a draw when you cannot mate the opponent anymore.
The second method is the main part of this lesson: 'stalemate'. We can only start with stalemate when the concept of mate has been mastered reasonably well.
The position in the diagram ( $\Omega$ ) is a mate. We clarify once more that the black king cannot do another step without remaining in check. In short: The king is in check and cannot play another move. These two

elements are needed for a proper understanding of stalemate.
In the diagram ( $\uparrow$ ), the black king cannot play a move. Still, Black is not mated because his king is not in check. In a position in which a player is not in check and is unable to play a move, we speak of a 'stalemate'. In case of stalemate the game is called a draw. This will come as a disappointment to White, because he is a queen and a rook ahead. He missed the win by stalemating his opponent.
We have to point out to the children that the game is over when it is stalemate! They are inclined to play on!
In the diagram ( $\Rightarrow$ ), the black king cannot play another move. There is a bit more material on the board, but the black pawns cannot move either. Black is therefore again stalemated. He cannot play another move and he is not in check.
When it is stalemate, we do not only check whether the king can play. That alone is not of any consequence to make it a stalemate (otherwise both players would be stalemated at the beginning of the game!). The condition is that not a single piece (of the player who is stalemated) is able to make another move!
In the diagram ( $\downarrow$ ), Black is to move. His king cannot move but he is still capable of making a move with his a-pawn. That means that he is not stalemated. After 1. ... a6-a5, White is forced to play a clever move. Of course, he should not capture on a5 with his king. A normal bishop or knight move will give the black king an escape square. White is then able to capture the a-pawn on the next move.
The next position is a bit harder and may

be skipped if necessary.
In the diagram ( $\uparrow$ ) the king on a8 cannot play and the same goes for the pawn on h 6 . That is not a problem for the students. What is surprising, however, is that the bishop on a7 cannot move either. Black would be putting himself in check and that is against the rules. Therefore, Black is also stalemated in this position. For children, stalemate is almost always the result of inattentiveness since all of their attention is still geared towards capturing pieces.
Smart students will try to use stalemate as a weapon after a little while. They will try to get rid of their last piece. Here is a foretaste. In the diagram ( $\Rightarrow$ ) the black king does not have another move, but the rook can still play. Black can give a check on d3 but after 2. Qg6xd3 , the king can move again. More useful is 1 . ... Re3-e8+; now White has to capture with the queen in order to give the black king a bit of air. Capture by the king leads to stalemate. It is of course important to note that it is only a stalemate when the player whose move it is cannot play anymore. In the position in the diagram ( $(\Omega)$, Black cannot play, but it is White's move, so the game continues. You cannot be stalemated if it is not your turn to move. White has to be careful, though, and remove his rook from the b-file, otherwise Black can claim a stalemate.
The students will be able to differentiate between the concepts of mate and stalemate after a bit of exercise, and recognize when there is no stalemate. This knowledge is necessary to be able to do the exercises successfully.
Exercises in the style of: "Try stalemating White or Black" ought to be avoided. They

are unnatural. On the other hand, exercises in which they try to avoid stalemate are instructive.
There are nice examples in the diagram ( $\uparrow$ ) for good groups. On the left, White can only win by promoting the pawn to a rook. After the rash 1. c7-c8Q, Black will be stalemated. On the right, White has more winning moves. The nicest one is $\mathbf{1 . ~ f 7 - f 8 R ~}$ (promotion to queen will again result in
 stalemate).

## Summary

Draw means an undecided game; the players share the point. We record the result as $1 / 2-1 / 2$. A game is a draw if there are only kings left on the board. It is also a draw in case of a stalemate. You are stalemated if it is your turn to move and you cannot make a legal move and you are not in check.
In a game in which you are in a winning position you have to be careful, not to stalemate your opponent accidentally. That will cost you half a point.

## Practice

## Reminder

Draw

## Workbook

$\square$ Rules or the game / Mate, stalemate or play: A \&
Explanation: A multiple-choice exercise. The students must choose the correct answer from the three answers provided: mate, stalemate or White / Black plays. If their choice is 'play', then the best move has to be written down.
Mistake: The wrong circle is marked.

Help: $\quad$ The students will arrive at the right answer through a step-by-step approach.
"Is the king in check?"
"Where can the king move?"
"Is another piece than the king able to move?"
Mistake: $\quad$ Stalemate is ticked but a piece other than the king can still play.
Help: To-the-point questions may assist. "Can the king play?" "Is another piece still able to move?"

## ANSWERS

$\square$ Rules or the game / Mate, stalemate or play: A

1) stalemate 7) $1 . \ldots$ a6
2) 3. ... Bxc8
1) $1 . \ldots \mathrm{Kd} 7$
2) mate
3) mate
4) Drawing
5) mate
6) $1 . \mathrm{Bf} 1$
7) stalemate
8) mate
9) $1 . \mathrm{Ndl}$


## GOAL OF THE LESSON

- learning another skill in delivering mate
- learning to play in accordance with a plan


## PRIOR KNOWLEDGE

- everything about mate and stalemate


## ACQUISITION

## Instruction

The number of games in which students aimlessly look for a mate when only the queen is left, is legendary. It is easy to use the examples from the students' games for this purpose. The advantage is that the students will be motivated to learn how they can checkmate the opponent's king in the easiest way possible.
Mating with the queen has to be leamed in three separate steps: the mating pattern, bringing the king into play and driving the enemy king to the edge of the board. These three parts will be discussed in turn. By presenting the mating pattern, we take the final goal as the point of departure. In the diagram ( $\Rightarrow$ ) there are two mating patterns. Tell the students to think of other mating positions too. Emphasize that the queen cannot deliver mate all by herself; cooperation with the king is necessary.
We exercise mate in one move with the positions in the diagram ( $\sqrt{ }$ ). On the left White has a choice between five moves; there is no choice on the right. Give a few more difficult examples depending on the

level of the group.
The exercise sheet that accompanies this lesson can be completed at this moment. Look under Workbook.
When mate in one with the queen has been exercised, we proceed to the previous phase in delivering mate: approaching with the king. We know that the black king cannot be mated by the queen all by herself. In the diagram ( $\widehat{0}$ ) the king has to assist. Point out that the black king still has an escape square left where he can move to. Black moves with his king back and forth. The white king moves to f 6 and White then delivers mate. We can check whether the children have understood this step by placing the king on another square. We now proceed to the technique of driving the king to the edge of the board with the queen. We set up the diagram ( $\Rightarrow$ ) on the demonstration board for this purpose. The queen on e5 keeps the black king in his prison. He cannot move cross the fifth rank or the e-file. A possible sequence is: 1. ... Kc6-b6 2. Qe5-d5 (makes the jail smaller yet) 2. ... Kb6-c7 3. Qd5-e6 Kc7-d8 4. Ke6-f7 (The king has access to the eighth rank only.) 4. ... Kd8-c8 5. Qf7e7 Kc8-b8 6. Qe7-d7 Kb8-a8. At this moment the danger of stalemating the king has to be pointed out. The black king always has to retain one square to which he can move.
At this point, phase two takes effect: the king approaches. Smart children will point out that the white king can be brought in as soon as after move four.
The process of mating with the queen has been learned in the reverse sequence, from the final phase - which is easy and
recognisable - to the initial position. Even though this is not the quickest method, it is the simplest one.
To complete the subject, we tell two students to finish the position in the diagram ( $\uparrow$ ) on the demonstration board. We repeat the strategies of the player with the queen during the mating process.

## Summary

Mating a king with king and queen can be accomplished using a simple plan. The freedom to move the king must be reduced constantly. The danger is that the jail becomes too small (stalemate). When the king has only one square left, the opponent's king comes to assist the queen.

## Practice

## Playing format

The children must exercise delivering mate with the queen in practical play. This skill can be acquired only through playing. The possibilities depend on the size of the group.

## Playing simultaneously

(size of the group < 12)
The students will take the side of the player with the queen. Do not hesitate to point out errors during their play; some guidance will prove to be very useful. Skipping a move is not a problem either, although this will not occur very often.

Students playing against each other (size of group > 12)
When the group is larger, children will

have to mate each other. After a successful attempt, the player with the queen takes the side with the king alone.
A drawback of this method is that playing the side of king alone tends to be boring. The only success that the side with the king only can obtain is a stalemate, and even that outcome will be due to a mistake of the opponent.
A good solution is to involve older students of the higher steps. They will be pleased to assist.

Playing against the computer (one child per computer)
The computer will be a grateful participant in game fragments in which superiority is very large. He will continue to play moves without complaining. The number of moves until mate offers a good indication as to how far the skill has been mastered.

## Workbook

$\square$ Mate / Mate in one with the queen: A
Explanation: The students will have little difficulty with this sheet. The idea is that they will learn to recognise the mating pattern with the queen and king.

## ANSWERS

Mate / Mate in one with the queen: $A$

1) 2. Qc2-c8\#
1) 2. Qf6-fl\#
1) 2. Qd5-a2\# (a8)
1) 2. Qd4-h8\#
1) 2. Qb3-g8\#
1) 2. Qg3-h2\#
1) 2. Qh4-e7\#
1) 2. Qc2-bl\#, (h3, h4, g6)
1) 2. Qb7-f7\# (cl, d1, g2, h2)
1) 2. Qf7-b7\#
1) 2. Qe2-g4\#, h2
1) 2. Qb5-a4\# (a5, b7) Capturing en passant

GOAL OF THE LESSON

- learning a special way to capture with the pawn


## PRIOR KNOWLEDGE

- all rules that deal with the pawn


## ACQUISITION

## Concepts

'en passant'

## Instruction

In order to put the rule of capturing while passing by (en passant) into perspective, we can tell a bit about chess history. The pawns were previously only allowed to move one step forward in the initial position. In order to speed up the game, people introduced the 'double-step' rule. However, this resulted in problems of the kind in the diagram ( $\Rightarrow$ ). The a- and b-pawn obstruct each other, but the g-pawn would be able to pass undisturbed past the white pawn to g5. To make this impossible, White may pretend as though the pawn has in fact done only one step. White may then capture the pawn: 1. ... g7-g5 2. f5xg6.
In the left side of the diagram ( $\sqrt{ }$ ), c2-c4 has been played; the right part shows the position that has occurred after Black has captured 'en passant'.
Two special features come to our attention regarding the other rules of capturing:

- The pawn ends up on an empty square.
- Capturing has to be carried out imme-

diately after the double step has been played.
It will help children to know that capturing in passing by (en passant) is possible only when the opponent plays a double-step move. It is important to put this double step of the pawn and the possible reaction of capturing 'en passant' into a context. We repeat the rule that has just been learned with the help of another in which one pawn is at the initial square and the other a knight's jump away on the adjacent file.
We go through the conditions once more in turn.
- Capturing 'en passant' is possible only after a double step of the pawn.
- The capturing move has to be carried out at once; if you play another move first, you lose the right to capture 'en passant'.


## Summary

The last rule of the game is a difficult capturing move by a pawn, which is called 'en passant'. The English translation is 'capturing while passing by', but there is not a single chess player who uses this expression.

## Practice

## Reminder

The pawn (2)

## Workbook

$\square$ Test / Repetition: C
Explanation: The positions are known and the theme of the exercise is also indicated. This should not give any problems.

Mistake: The answer is wrong.
Help: See the relevant lesson.
$\square$ Test/Mix: C
8
Explanation: The themes of the exercises are indicated underneath the diagrams, therefore we cannot really consider these a true mix. Most students should be able to obtain a good result.

Mistake: White plays with the king in position 3.
Help: Getting out of check by moving away the king is 'always' correct. Set up the position, let them execute the move and ask which move the opponent is going to play. He would capture on b2 with the bishop. Discuss all possibilities to get out of check and see which move will cost the least number of points. The best solution is 1 . Rdl xd4 e5xd4 2. Qb2xd4+, even if that costs a point.

## ANSWERS

Test / Repetition: C

1) 2. Qb3-g8
1) $1 . \ldots a 7-a 6$
2) yes
3) $1 . \ldots$ Qfl-hl
4) $1 . \ldots$ Be6xc8
5) 6. ... Rf8-fl
1) 2. ... $\mathrm{Ne} 5-\mathrm{f} 7$
1) 2. Bb5xc6+
1) 2. Qc2-bl, cl, dl, g2, h2
1) 2. $\mathrm{Bb} 2 \mathrm{xf6}$
1) 2. Relxe5
1) 2. ... Bf6xe5

Test / Mix: C
$\begin{array}{ll}\text { 1) } 1 . \mathrm{Rflxf} 7 & \text { 6) stalemate } \\ \text { 2) } 1 . \operatorname{Bh} 3-\mathrm{g} 2 & \text { 7) } 1 . \mathrm{Bd} 7 \mathrm{xh} 3\end{array}$
2) $1 . \mathrm{Bh} 3-\mathrm{g} 2$
7) 1. Bd7xh3
3) 1. Rdlxd4 e5xd4 2 .
8) 1. ... Nd5-f4

Qb2xd4+;
9) 1. Be2-h5

1. Kgl-hl? Bd4xb2
10) 11. c3-c4
1) $1 . . . . c 7-c 6$
2) 3. ... Nc3xd5 2. Nf4xd5 (2
1) 2. ... Bf8xa3
points)

## GOAL OF THE LESSON

- learning how to notate moves


## PRIOR KNOWLEDGE

- being able to give every square a name


## ACQUISITION

## Concepts

notate, notation, capital letters, lower-case letters, block letters

## Instruction

At the beginning of the chess lessons we have already made the students aware of the fact that the squares all have their own names.
We recall the necessary prior knowledge by letting the students name a few squares. We can do this quickly and efficiently with the demonstration board. We then start with the diagram ( $\Omega$ ). Then play the move: Rd4-d8. We are now able to write down the move on the blackboard (or on any other writing aid). We tell them that the rook is rendered as capital $\mathbf{R}$. After this write down the square where the piece comes from, in this case d4. Next, we write a hyphen, - , which indicates: 'goes to' and finally we write d8, the destination square. This will not present any problem to the children.
Now play another move with the rook and let the children describe how the move should be written down. For the move


Rd8-h8 the child should indicate what is to be written down. The letter $\mathbf{R}$ for the rook, d8 for the square it comes from, hyphen for 'goes to' and $\mathbf{h 8}$ for the square it arrives at. We replace the rook by a knight. We now play the move $\mathbf{N a} 4-\mathrm{c} 5$ (diagram $\uparrow$ left) and follow the same method.
Once this is clear, we can give the complete list of the pieces:
K for king
$\mathbf{Q}$ for queen
R for rook
B for bishop
N for knight
We use N for knight because the letter K is already used for the king.
We do not write anything for the pawn and we have to explain and emphasis this with an example. Students are inclined to render the pawn with a lower-case p or pa.
On the right side of the diagram the pawn move g2-g4 may be carried out and written down.
We now come to the representations of special moves (diagram $\Rightarrow$ ). Consider first capturing. We capture the black bishop with the white rook, and record this on the board as Rd4xf4. We explain: capital R, d4 square of departure, a multiple sign ( $x$ ) for capture and $\mathbf{f 4}$ as the square of arrival. The children practice this using the demonstration board too. These exercises must also include moves made by other pieces.
We then introduce the symbol that represents check (diagram 』).
We play Be1-h4 check. We only need to explain that we put a plus-sign ( + ) behind the move, to signify that Black is in check:
Be1-h4+ (in older chess books, the deathcross $\dagger$ is used).


The white pawn is going to promote in the diagram ( $\uparrow$ ). We record this as: c7-c8Q. The common notation for the pawn move and the capital letter for the piece that is selected. We take the first letter of the chosen piece for promotion to other pieces: R for rook, B for bishop and N for knight.
The capturing move of the pawn in the right section is annotated as $\mathbf{4 x g} 5$. Capturing 'en passant' is recorded as a pawn move with the addition of e.p. If this lesson is given before lesson 14, then the notation of 'en passant' may be skipped.
In the diagram ( $\Rightarrow$ ), White plays 1. b6-b7. A mating move can be rendered by a simple remark: mate (after the last move). We find many signs for mate in the chess literature, including a double checking mark (++) or hash \#.
There is a separate notation for castling: 0-0 (zero-hyphen-zero) and 0-0-0 for king-side- and queenside-castling respectively.
The students will from now on be able to note down their solutions when going through their exercise sheets. This may take a bit of coaxing, since most of the children prefer to draw arrows. It would be ideal if they would now and again note down their own games (for the moment only the first 10 to 15 moves).

## Summary

Noting down moves is called 'notating'. The rules are simple provided you identify the squares. You are able to note down a move by means of the first letter of a piece, a hyphen and the names of the squares. When recording a capturing move, we write a multiple-sign instead of a hyphen.


## Practice

## Reminder

The notation

## Workbook

$\square$ Notation / The long notation: $A$ $B$
Explanation: The piece in the diagram moves to the square with the circle or the circled piece. This move needs to be recorded in long notation. A summary of the notation rules are on the board:

| K king | x | captures on |
| :--- | :--- | :--- |
| Q queen | + | check |
| R rook | mate | mate |
| B bishop | $\#$ | mate |
| N knight | Q | promotion to queen |
|  | pawn | $0-0$ |
| - moves to | $0-0-0$ | kingside castling |
|  |  |  |

$\square$ Material / Winning material: A
Explanation: Winning material is possible in all positions. The students must choose from:

- capture an unprotected piece
- the profitable exchange
- the twofold attack
- promotion (does not need to be a capturing move!)

Let the students look for unprotected pieces, insufficiently protected pieces or attacks on major pieces first.
Mistake: $\quad$ The solution is a capturing move, but it still does not win material.
Help: The position resulting is studied from the other side. "What did you win?"
"What can your opponent play now?"

Notation / The long notation: $A$

1) 2. Rf2-f7
1) $1 . \mathrm{c} 2-\mathrm{c} 4$
2) 3. ... Nb6-d5
1) $1 . \ldots$ Qd8-h4
2) $1 . \ldots \mathrm{Bg} 7 \mathrm{xal}$
3) 4. Ne 3 xf 5

Material / Winning material: A

1) 2. ... Ba6xfl
1) 2. Rc5xh5
1) 2. $B e 4 x b 7$
1) 2. ... Ng4xe3
1) 2. Bc5xe7
1) 2. ... Bc5xe3+
1) $1 . \ldots \mathrm{Nb} 8-\mathrm{d} 7$
2) $1 . \mathrm{Ra} 1-\mathrm{el}$
3) 4. Ne5-f7 mate
1) 2. ... 0-0-0
1) 2. e7-e8Q
1) Drawing
2) 3. Bb 5 xd 7
1) $1 . \mathrm{Nd} 5 \mathrm{xe} 3$
2) 3. Rf7xa7
1) 2. Bb 2 xg 7
1) 2. ... Qd4xf4
1) 2. $\mathrm{g} 5 \mathrm{xf6}$


## List of concepts

$\left.\begin{array}{ll}\text { attack } & \begin{array}{l}\text { A piece is in a position from where it can capture a } \\ \text { piece of the opponent (see lesson 3) } \\ \text { The } 1^{\text {st }} \text { and } 8^{\text {th }} \text { rank of the chess board. The phrase } \\ \text { is primarily used for 'mate (delivered) along the } \\ \text { back rank.' }\end{array} \\ \text { back rank } \\ \text { A very bad move. The term is relative. At a lower } \\ \text { level, a blunder allows mate or loss of a piece. At a } \\ \text { higher level, a serious positional error is also } \\ \text { considered to be a blunder. } \\ \text { The removal of a piece of the opponent (see lesson }\end{array}\right\}$
$\left.\begin{array}{ll} & \begin{array}{l}\text { where the king may escape to. Less often used for } \\ \text { other pieces. } \\ \text { White captures a piece and Black recaptures that } \\ \text { piece. The pieces should (roughly) have the same }\end{array} \\ \text { value. } \\ \text { exchange } & \begin{array}{l}\text { The difference between a rook and a bishop or } \\ \text { knight. The player who captures a protected rook }\end{array} \\ \text { exith his bishop or knight, wins the exchange, i.e. } \\ \text { he has made a profitable exchange (or is the } \\ \text { exchange up). It makes a difference of two points. }\end{array}\right\}$

|  | lesson 7). |
| :---: | :---: |
| material | Pieces and pawns. If White is ahead in material, this means that White has more points. |
| minor promotion | The promotion of a pawn to a rook, bishop or knight. Promotion to a queen is the norm because she is worth the most. |
| mobility | The number of moves that a piece can move to. |
| move away | A form of defence. The attacked piece is played to a safe square (see lesson 5). See also 'escape'. |
| move | The action performed when moving a piece on the chess board. |
| notate | Writing down the moves of a game. |
| opponent | The person you are playing against. |
| overlook | Chess phrase for not seeing something during a game. |
| piece | We should only use this for the king, queen, rook, bishop or knight. In this manual, the expression 'pieces' is also used to refer to pieces and pawns collectively. Which of the two meanings is intended will be clear from the context. |
| player | One of the two opponents in a chess game. |
| prison | The area for the opponent king from where he cannot escape anymore. The concept is used when mating with the queen (see lesson 13). |
| promotion | A pawn that reaches the other side (the $8^{\text {th }}$ rank for a white pawn, the $1^{\text {st }}$ rank for a black pawn) is promoted. It changes into a queen, rook, bishop or knight of the same colour. See also minor promotion. |
| protect | A form of defence (see lesson 5). |
| rank | A uninterrupted sequence of horizontal squares on the chess board (see lesson 1). |
| refute | Show that a certain move (or sequence of moves) is incorrect. |
| regular move | A move made in accordance with the rules (laws) of chess. |
| resign | Stopping the battle before being mated. This never happens during Step One. |
| simultaneous display | A match in which one player tests his skills against more than one player at the same time. |


| square | Name of a space on the chess board. There are 32 <br> 'white' and 32 'black' squares (irrespective of the |
| :--- | :--- |
| actual colour). |  |
| stalemate | A player is stalemated if he is not in check and |
| cannot play any legal move (see lesson 12). |  |
| supporting mate | Mate in which the piece that delivers mate is <br> protected by another piece (see lesson 7). |
| take | Synonymous for capture or grab. |
| threat | An unpleasant move of the opponent that is |
| looming, e.g. a mate-in-one. Most of the time, a |  |
| defence against a threat is possible; only mortal |  |
| threats cannot be countered. |  |



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Kowloon Central Post Office Kowloon, Hong Kong S.A.R. (China)

For Europe: c/o Kaarlo Schepel
Wadwerderweg 89, 9988SV Usquert
the Netherlands E-mail: kv.s@12move.nl


## Ordering

The following books are available in the Step Method series:

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| :--- | :--- |
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| Extra workbooks: | Step 3 extra, Step 4 extra, Step 5 extra |
| Plus workbook: | Step 3+ |

English versions = bold
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| Prices |  |
| :--- | ---: |
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| Workbook (except for Step 6) | $€ 4,95$ |
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## Information

C. van Wijgerden

Lotte Stam-Beesestraat 78
3066 HB Rotterdam
The Netherlands
Tel: 31 (0)10 4564122
Fax: 31 (0)10 4564184
E-mail: info@stappenmethode.nl



[^0]:    $\square$ Board / Naming the squares: $A$
    Explanation: The names of the squares on which the pieces are standing, should be written at the bottom of the diagram.
    Mistake: Squares are wrongly named. A few mistakes indicate quick work or working without sufficient concentration.
    Help: Point out the mistake only. If this is insufficient, then let the student read through the reminder or allow another student to help.

